Clinical Lecture

ON

TROPICAL ABSCESS OF THE LIVER.

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GENTLEMEN,—The subject of hepatic abscess is one of great interest to all English students of medicine. It cannot fail that some of you will have to practise your profession in some part of our tropical possessions, and in these days, when locomotion is so rapid and easy, some of you will also as certainly not fail to have experience of this disease at home. I think it is not unlikely that abscess of the liver is now less often met with in the tropics than formerly. I have no facts to support this view, but I conceive it to be likely, because Europeans nowadays take better care of their health, eat and drink less than formerly, come home at shorter intervals to recruit their powers, and are thus less exposed to and saturated with malarial influence.[1] For twenty-one years I have had a special experience of Anglo-Indians of all ranks in connexion with the services of several of the great Indian railway companies, and I may at once state that my experience of hepatic abscess as a cause of invaliding in these persons has not been extraordinary. To be sure, the worst cases have died in India or on their way home; others have had favourable, and generally rapidly favourable, terminations by rupture of the abscess, usually into some part of the gastro-intestinal tract. Others again, such as the case I take for the subject of to-day's lecture, have developed the symptoms of their malady after arrival in this country. I wish first to point out to you that all Europeans in the tropics are not equally liable to hepatitis and abscess, as I have here and elsewhere declared; the special predispositions of persons materially affect their tendency to go wrong in any morbid direction. A large chapter in the history of medicine within the tropics has yet to be written, which shall relate to the influences of climate, and the habits thereby engendered, upon individuals of the several constitutional conformations or so-called diatheses. To such a chapter the late Dr. Norman Chevers contributed very notably and with great ability. He formed the opinion that persons with tubercular proclivity were more than others apt to suffer in India from dysentery, while strumous persons were similarly predisposed to hepatic abscess. In respect of idiopathic hepatic abscess, he did not consider that any of the ordinarily assigned causes, such as malaria, intemperance, dysentery, portal pyæmia, and tuberculosis, were essential, and he concluded that the influence of tropical heat was specially causative.[2]

You have been already taught in your systematic lectures that hepatic abscesses are mainly divided into two classes: first, the pyæmic or multiple form, and, secondly, the tropical or solitary form. This is an artificial division, and worthy of retention; however, you must expect to find in practice that there may be more than one abscess owning no direct connexion with either dysenteric ulceration or pyæmia. The etiology of liver abscess has been a hotly debated question, especially in respect of the relation which dysentery bears towards it. At one time the abscess was thought to induce the dysentery; later it was thought that dysentery led to the abscess. Again, it was believed that both were due to a common cause. The late Dr. George Budd, of King's College and the *Dreadnought* Hospitals, was one of the earliest advocates of the direct connexion between dysentery and hepatic abscess, teaching that the latter was due to direct absorption from the ulcerations in the colon of purulent or infecting matters. This theory, you see, is especially an embolic or pyæmic one. Hepatic abscess, as most commonly seen in Europe, is of the pyæmic or multiple variety, and is naturally regarded as a most fatal malady. No one now doubts the connexion I have just described, cases being frequent in which purulent absorption takes place from breaches of surface in any part of the alimentary canal drained by branches of the portal vein. Thus gastric ulcer and ulceration of the gall-bladder and bile-ducts, and operations on the rectum, may induce embolic abscess in the liver. A noteworthy point in the matter is this, that dysentery is far more common *uncomplicated* with hepatic abscess. There must, therefore, be some other factor than mere ulceration to account for infecting absorption and resulting hepatic abscess, and this factor is without doubt *a special infectivity attaching to the detritus of the bowel ulcerations*. It is very noteworthy that no such accident occurs in connexion with the ulceration of enteric fever or tuberculosis. With suppurative pylephlebitis we are not now concerned; the mischief here extends along the veins involved. Next, observe that hepatic abscess in the tropics is common enough when no history of dysentery is to be had in the case, no pyæmia is present, and no very obvious cause can be adduced. The pyæmic theory fails to fit such cases; and in the majority of instances in the tropics the abscesses are either solitary or limited to two or three, whereas in Europe we commonly find innumerable points of suppuration in the liver, and readily discover their origin in some distempered breach of surface in the line of the portal circulation, or in some other part of the body. Hence, both forms of abscess may occur in the tropics, but the pyæmic or multiple form only arises in Europe. A large solitary abscess may occur in connexion with dysentery in the tropics, or several small dysenteric abscesses may coalesce gradually into a large one; but this is not often seen in this country. Multiple pyæmic abscesses are the rule here. The late Dr. Moxon thought the differences between tropical and pyæmic abscesses depended on their different ages or duration, and that ulcerations or cicatrices of them would be usually found if carefully sought for. But this view will certainly not apply to the history of many cases. The embolic theory has captivated the attention of pathologists to the exclusion of that which explains the production of abscess as the outcome of a specific hepatitis. The latter explanation appeals rather to the bedside than the deadhouse physician. Many differences of opinion in medicine are, in my thinking, to be thus explained. Clinical explanations may be seemingly fanciful sometimes, but they cannot be dispensed with till post-mortem research has modified or confuted them. It would appear that with improved methods of treating tropical abscess the opportunities for examining the intestines for cicatrices of ulcers will grow fewer and fewer.

What, then, are the probable causes of the solitary or tropical abscess? Without doubt they depend on peculiarities of life and climate. It is certain that tropical climates induce in many Europeans congestion and enlargement of the liver. Unusually, hot weather in Europe produces this much, unless great care in diet and habits of life be practised. Indulgence on the part of tropical residents in European habits as to eating and drinking, with undue exposure to the sun, are to blame to a large extent for this. But beyond these causes, there is something specific in the effects of prolonged heat upon the functions of the liver; all constitutions not being equally susceptible, however. Again, it seems certain that malarial poisoning has largely to do with this congestion. The spleen suffers with the liver under this exposure, and both organs fail of their due functions. It is noteworthy that hepatic abscess is less common by far in the West than in the East Indies and China. Malaria is perhaps equally pernicious in both. It is not remarkable that the bowels should suffer sometimes together with the other viscera mentioned, and hence, with exposure to chill, the risks of impure water and of improper food, all the conditions for the onset of dysentery are provided. In Indian nosologies you will often meet with the term "hepatitis": acute and chronic varieties are mentioned. No very clear distinction has been drawn between congestion and hepatitis. If the inflammatory process reaches a certain point, we naturally have to deal with abscess as the outcome of it. Chronic hepatitis is applied to a long-standing condition of hyperæmia and engorgement, which, if neglected, usually passes into a form of cirrhosis. As indicating in some measure the etiology of the troubles we are now considering, note that women are more rarely the subject of such hepatitis in India as leads to abscess, and that in children the disease is practically unknown, although

[1] Sir Joseph Fayrer, however, informs me that he thinks hepatic abscess is now as common as formerly.

[2] Sir Joseph Fayrer and others with large Indian experience do not, however, agree to this.

dysentery is very common amongst them. Hepatic abscess is rare under the age of twenty, and more frequent after twenty-five years. These facts, which I give you on the authority of able observers—Dr. John Macpherson and Sir Joseph Fayrer—would indicate that alcoholic intemperance, with greater exposure to solar influence and intenser grades of malaria, are not a little causative, and this is the opinion I have been led to form.

With these remarks, with which I have thought it well to begin my lecture to-day, I now pass to the case illustrating it. It is that of M. N——, aged twenty-eight, single, a medical officer practising in the Bombay presidency. He went out to India in 1883. He is of excellent constitution, and his family history is satisfactory. He has been stationed in several districts, and been exposed to malaria. After being out for a few months he had a slight attack of dysentery, being laid up for ten days. He made a good recovery, and had no return of this trouble. He was always temperate. Within the first year of his sojourn he had an attack of catarrhal jaundice, and he also suffered six or seven times, but not severely, from malarial fever. As he expressed it, "he knew he had a liver." In June, 1886, he left India on leave of absence for three months and came home, landing on July 19th. He believed himself to be in perfect health. In August he suffered from chill after being overheated, and was seen by Mr. Coulbank of Twickenham, who found him confined to bed, suffering much pain from pleurisy in the left side (postero-lateral region). His liver was then enlarged and tender. His temperature reached 103° and 105°. (Dr. Norman Moore saw him later in my absence, and confirmed Mr. Coalbank's opinion as to pleurisy, with malarial fever.) He lost flesh somewhat rapidly, and looked ill. On Sept. 16th he was recovering, but was still weak, had a coated tongue, and wavy, uneven pulse. Dr. Sedgwick Saunders, who saw him at that time, refused to allow him to return to India. On Oct. 28th I saw him for the first time. He was still thin and cachectic-looking. I could find no physical signs anywhere in the chest beyond a trifling amount of dulness, with imperfect respiratory note, in the left postero-lateral region. There was no jaundice, and the urine was natural. I sanctioned his return to India in November. On the night of Nov. 1st, after a busy day in London, he awoke with very severe pain at the epigastrium radiating to the left side. The pain was of a stitchy, "catching" character, and there was agonising cough. In no way could he account for this attack. He had had a slight cough for a few days previously. He came up from Twickenham and saw his friend, Dr. Goodhart, who examined him, but found no signs of pleurisy, but observed some fulness about the left hypochondrium. His temperature was raised to 102° and 103° at this time. Cough troublesome, with glairy, tenacious sputa, not rusty. He kept to bed for three weeks. The pain was very severe, and nothing relieved it. There was a dull dragging pain in the left costal arch, and much epigastric tenderness. No rigors. His weight was then 10st. 7½lb., his usual weight being about 12st. On Nov. 30th I found the same physical signs as before in the left pleura. On Dec. 11th I saw him again. Dr. Andrew had also examined him, and found nothing to explain his severe pain, which was attributed to pleural adhesions. The pulse was 84, and regular. He was still looking pale and ill. I had a suspicion of hepatic mischief as the cause of all his trouble, but there were no physical signs to justify any certainty of this at this time. I recommended an extension of leave for three months, careful regimen, and good diet. On January 19th, 1887, Dr. Andrew again examined him, and found a tumour projecting under the left costal arch, indistinctly fluctuant. No improvement had occurred in the general health. There was a slight icteric tint of the conjunctivæ. On the 21st Dr. Andrew and I saw him together. There had been no rigors, no sweatings, no shoulder pain. The tumour was evidently an abscess in the left lobe of the liver. Slight pulsation was communicated to it from the heart. At the beginning of January severe pain had returned about the ensiform cartilage, but there had never been freedom from pain in the left side since October. Vomiting had occurred about once daily, generally about an hour after taking food. There was much flatulence. He was admitted to John ward on Jan. 22nd. The temperature was 98·2° on the first night. The tongue was coated all over. Bowels open; stools bilious. Urine: Specific gravity 1025; faintly alkaline; depositing phosphates; void of albumen, blood, glucose, and bile. Heart's apex in fifth space, in normal situation. Sounds natural. Pulse 72, of fair volume and power, and regular. In the chest nothing abnormal. The liver-dulness began at the sixth rib. To the left of the epigastrium a rounded projecting tumour, everting the cartilages; deep-seated fluctuation made out; the skin was not red over it. Spleen not felt. Abdomen otherwise natural. Lower edge of right lobe of liver not felt or apparently depressed. On Jan. 23rd the temperature reached the highest point recorded in the hospital—100·2°. On the 24th, after a restless night, the temperature was 99·2°. Chloroform having been administered, Mr. Langton aspirated the tumour, and twelve ounces of chocolate-like grumous matter was withdrawn, containing pus and débris of blood. Temperature last night 98°; to-day 97·8°. Sick after chloroform. Dragging pain relieved, but pricking pain in region of abscess. Pulse 64, of good volume and strength. Had better night. On the 26th the temperature was 96·4°; pulse 72, feebler and irregular. Much nausea, and vomited once. Urine loaded with urates. On the 29th he was going on very badly; no action of the bowels. It was decided now to have the abscess freely opened. Under chloroform and with full antiseptic precautions, my colleague, Mr. Langton, cut down through the left rectus abdominis and came upon thickened adhesions between the sheath of muscle and peritoneum. He passed in an exploratory syringe, then a director, and then his finger. Reddish pus (six ounces) flowed freely away, and an indiarubber tube was inserted and stitched into the lips of the wound. Iodoform and antiseptic dressings were used. The nausea continued for two days and gradually passed off. Nourishment was badly taken, and a quinine and nitro-hydrochloric acid mixture could not be borne. Nutrient enemata were given in default of sufficient by the mouth, and about two ounces of brandy were given each day. The wound did well and discharged freely. It was dressed daily antiseptically, and remained quite sweet. The temperature remained subnormal. The appetite soon became large, and flesh was rapidly gained. On Feb. 12th the patient was sitting up daily and making progress in all respects.

Let me briefly review the history and course of this case, and comment on the procedures of treatment. The patient while in India suffered from most of the ailments that befall Europeans, and, though never severely ill, it is clear that the climate and the circumstances of his life told upon him. Thus he had dysentery, malarial fever, and catarrhal jaundice. I have already told you that he was a very temperate man, and lived carefully. In June of last year he left India, feeling in perfect health, intending to stay a few weeks only at home. In August he began to suffer after a chill, and had pleurisy and remittent fever. At this time the pleurisy was at the back of the chest, on the left side. He failed to make a satisfactory recovery of his general health, losing flesh, looking ill, and having a not very explicable cough. It would be interesting to know the temperatures that occurred at that period. Very early in November a second attack of pleurisy unaccountably came on, this time near the cartilages adjacent to the ensiform cartilage, the pain being very severe and the temperature raised. No rigors and no sweatings. Six weeks later, although the second attack of pleurisy had passed off, there was no improvement in the general health, and a pinched and sallow appearance was manifest. Physical signs alone were insufficient to explain this condition. In three weeks' time there was a return of the severe pain near the ensiform cartilage, and in less than three weeks afterwards a tumour was detected in the left lobe of the liver. Gentlemen, it is easy to be wise after an event, but the fact remains that while the symptoms I have detailed to you fall in admirably with those that might be expected in such a case, there was a marked absence of physical signs to justify a confident diagnosis of all that was proceeding in the liver. Suspicion there was in the minds of several of those who saw the case, but nothing definite could be established, and certainly nothing could justifiably have been done more than was done.

The case, then, illustrates a point which has long been recognised in respect of the latency and insidious character of hepatic abscess. Large collections of matter may occur in the liver without any symptoms distinctly referable to that organ. In this instance it is not clear when the abscess began to form. It is quite possible that the disease was already in progress before the patient left India. The pleuritic attacks were plainly significant of the mischief that was going on below the diaphragm, and the severe pains near the ensiform cartilage betokened adhesive capsular

hepatitis of the left liver lobe, the results of which ultimately proved so protective and beneficial. You will understand that according to the special seat of the abscess so will the symptoms vary in any case. Thus, if they come to press or point upwards, pain will be felt and irritation be excited in the diaphragm, pleura, or lung, with cough; if downwards, there will be interference with the functions of the stomach, and nausea and vomiting may be expected. In this instance irritation occurred on both aspects of the left lobe, the pleura and stomach both being implicated. The liver substance appears to be little sensitive, but when the capsule is involved there is commonly severe pain; hence the pain in hepatic abscess is probably due to pressure on the capsule and to the happily protective perihepatitis that is often set up as the abscess pushes its way.

The leading symptoms, when present, of abscess of the liver are fever, hepatic pain, severe gastric catarrh, with foul coated tongue, nausea, vomiting, hiccough, and inability to lie on the left side. The abdominal wall is rigid, one or other rectus muscle contracting to protect tender parts below. Pain in one or other shoulder or scapular region is sometimes met with, induced either through the reflex mechanism of the phrenic and cervical nerves, or through the pneumogastric and spinal accessory branches. There is great languor and lassitude, rigors are common, and nightly rises of temperature. Slight jaundice is present, simulating ague. The urine is loaded with lithates, and may contain albumen. As suppuration proceeds profuse sweats occur. Bile is present in the stools. Tropical abscesses point usually superficially, and present in a low intercostal space or under the cartilages in the hypochondria. The spleen is not enlarged as a rule. Now in this case there were no rigors, no shoulder pains, and no sweatings. The absence of these symptoms added somewhat to the difficulties of diagnosis.

Respecting the treatment. There is now only one opinion as to the necessity of early and free opening for tropical hepatic abscess. At one time, in India, it was thought best not to operate, and to wait for spontaneous bursting. Nature was found to be sometimes kind, and to allow the pus collection to empty itself into some evacuant channel. But, unhappily, rupture into the lung or pericardium, or into the peritoneum, is greatly to be feared. Amongst the triumphs of modern antiseptic surgery is the treatment of hepatic abscess. A more important question remains for consideration in each case, and it relates to the establishment of adhesions between the liver capsule and the parietal peritoneum. There is always an apprehension of the abscess-cavity collapsing after being opened and discharging into the peritoneum. To prevent this accident, preliminary measures have been recommended to set up inflammatory adhesions. This question also comes to be discussed in operating on hydatid cysts in the liver. It has been proposed to set an issue with caustic potass and peas, and thus secured the end desired. I have seen this method practised twice, but do not expect to see it again. Simply tapping by aspiration is often performed in the hope of setting up adhesions in advance of the subsequent graver operation. This was done in the present case partly for completing the diagnosis, and with the prospect of aiding adhesions. Again, it is proposed to cut down to the surface of the tumour and stitch the edges of the wound to it, completing the operation a few days later. In by far the majority of cases these methods are unnecessary. In the progress of the abscess, as it pushes towards the capsule, perihepatitis is often induced and firm adhesions are set up. This is not, perhaps, so often the case in suppurating hydatid cysts. In support of the general safety of immediate and bold operative measures, we have the unique experience of Sir Joseph Fayrer and of many of our surgical brethren in India, a body of men of whom this country is not, I think, sufficiently appreciative, who now never hesitate to evacuate these abscesses so soon as they diagnosticate them, and practically disregard the question of adhesions. Their results were so satisfactory that we may fairly follow them in this practice. Any remaining considerations, such as insertion of drainage-tubes, relate so specially to surgical details that I cannot enter upon them. If decided improvement does not follow the evacuation of the abscess, we may suspect either imperfect drainage of it or the existence of an independent one. You remember that there may be two or three centres of suppuration in even tropical non-embolic cases. I would add a few words on the subject of washing out the abscess cavity. I believe this to be unnecessary if free drainage is secured, and even if done antiseptically to be a possible source of mischief. In this case, as in cases of empyema, I believe it to be the better practice to abstain from washing out the cavities. You may ask if any surgical interference is ever called for in respect of dysenteric or multiple abscesses. Even in these cases, according to Sir Joseph Fayrer, puncture and evacuation may be useful.

Respecting the prognosis for the future in any case where the abscess has burst favourably or been opened successfully, we have no grounds for believing that any special immunity from a future attack exists. Such patients do best to leave the tropics and live at home, but not seldom they return and do well. Second attacks may occur, but it is generally believed that these may be due rather to undeveloped or residual abscesses, which have later become active. A residual abscess may long remain encysted, and be symptomless, till by gradual thinning of its walls it suddenly gives rise to fatal symptoms. Dr. Maclean and Professor Aitken have related such a case to me from their experience. Hence, there must always be a somewhat guarded prognosis in any case, and for some long period. In my experience, where abscesses have burst favourably the patients seldom long remain unmindful of their trouble. Dragging pains, probably caused by adhesions, are sometimes suffered from. In the case of an officer of Horse Artillery under my care, he could never wear his sword comfortably through a field day. With care in diet, and in all other respects, some of these patients manage to complete their tropical career fairly well. The drugs which prove useful are quinine, cinchona, and mineral acids. When the tongue is coated and there is no appetite, alkalies, such as sodium bicarbonate with bark, given after effervescence with a little citric acid, do better than quinine and acid. Subsequently, the chloride of ammonium, with some bitter, or with the mineral acids, is very useful. Prolonged stay at the seaside in some mild or sheltered part is the most efficient climatic agent. Sea-bathing and cold baths must be forbidden, and warm sea-water baths or tepid sponging only be sanctioned.

I will draw out for you on the board the leading characters of the two varieties of hepatic abscess, so as to impress them on your memory. Remember, however, that all such categories are made on somewhat rigid lines, and that large bedside experience tends to impair one's estimate both of tabulation and statistics:—

HEPATIC ABSCESS (two chief varieties).

A. *Tropical* (specific suppurative hepatitis).—Solitary, or few in number. May be very large, form rapidly, or occupy some months before urgent symptoms arise. Course often latent and insidious. Connexion with dysentery not commonly traceable. Infrequent in women; unknown in children. Rare before twenty; commoner after twenty-five. May occur in temperate and careful-living persons. Tendency to burst; jaundice slight; spleen not enlarged. Probably due to solar, climatic, and dietetic influences. Some constitutions—e.g., strumous—more apt than others to suffer. Commoner in East than in West Indies, and occurs on Mediterranean littoral.

B. *Pyæmic* or *Embolic* ("dysenteric abscess").—Multiple, may be very numerous and small. Course rapid. Follows on dysentery or septic inflammation of parts drained by portal vein. Part of general pyæmia, especially after head-injuries and damage to medulla of bone. Jaundice marked; Spleen enlarged. Seldom bursts. Occurs independently of climate, but much connected with dysentery.

THE TOWER HAMLETS DISPENSARY.—This old institution, founded in the year 1792, seems to be well supported. In spite of the hard times, donations and new subscriptions have been received which have reduced the indebtedness of the dispensary. The mortality in the year, with a total of 4497 cases, was 75. The chief causes of death were: bronchitis, 11; consumption, 10; whooping-cough, 5; pneumonia, 4. The payments on account of the dispensary are £511 14*s.* 10*d.*, of which the patients contribute £139 4*s.* All the patients do not pay. They are divided into two classes—those receiving relief gratis, and those coming under a system of payments, as follows: recipients to pay an entrance fee, and on each renewal of the letter, 6*d.*; on each subsequent attendance at the dispensary, 3*d.*; for each visit at home, 6*d.*; teeth extracted, 3*d.*; midwifery fee (by midwives), 3*s.* 6*d.* Would it not be possible to make all such institutions provident—i.e., to procure systematic periodical payments throughout the year, and pay the medical men an honorarium at least?

ABSTRACT OF

Lumleian Lectures

ON THE PATHOLOGY OF INTRA-UTERINE DEATH.

Delivered at the Royal College of Physicians of London, March, 1887,

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LECTURE II.

IN this lecture Dr. Priestley spoke of the causes of intra-uterine death which are associated with faulty conditions of the fœtal envelopes and fœtal appendages, taking first those which properly belong to the earlier part of pregnancy. He stated that a too scanty formation of the decidua may lead to the growth of a placenta too small for the needs of the embryo. Charpentier believes that an arrest of development in the decidua reflexa, or its premature destruction, are frequent causes of death in the embryo. When the ovule has been successfully implanted in the decidua, and the normal development of the decidua reflexa and other structures is going on in progressive series, there is great tendency in some women to go wrong, apparently from mere weakness of the outer structures which form the ovum. In some women the union between the pregnant uterus and the decidua is so unstable that a fall or stumble, or a shaking of any kind, may be quite sufficient to detach a portion of the latter, rupture the intervening vessels, and cause extravasation of blood. If limited, these extravasations need not interrupt the continuance of pregnancy. If more extensive and separating a larger portion of the decidua, they necessarily interfere with the nutrition of the ovum, produce death of the embryo, and precipitate abortion. The same result may ensue from contractions of the uterus, either provoked by local irritation directly applied, or from reflex causes—as, for example, suckling a child after a fresh pregnancy has commenced. Occasionally, during the very early stages of gestation, blood flows directly into the decidual cavity, and fills it with coagula. The result is either that all traces of the embryo and its immediate surrounding structures are obliterated, or the embryo is compressed and destroyed by the invading flood, rudimentary portions of it only being discovered. In from the second to the third month the decidua reflexa or ovuli is fully formed, and the villi of the chorion are everywhere embedded in its substance. Then another form of hæmorrhage may occur. In this the blood is not alone extravasated between the decidua vera and the uterine wall, or into the meshes of the decidua itself, but between the decidua reflexa and serotina, and the chorion or outermost of the true fœtal membranes. In the process of development the villi of the chorion are pushed into the decidual tissue, and are soon surrounded by the bloodvessels which are to form the maternal placenta. The decidua is, then, a highly vascular membrane, especially at the site of the future placenta, and the maternal vessels which everywhere ramify through it undergo a development which in the human body is unique. Appearing first as capillaries, they rapidly enlarge, and eventually become sinuses, which are filled with maternal blood, and in which the fœtal villi are eventually suspended. These delicate and rapidly dilating maternal vessels are very liable to rupture. Hæmorrhage taking place in this locality floods the loose tissue of which the decidua serotina and reflexa is composed, and destroys or compresses the chorion villi implanted there, being sometimes so extensive as entirely to surround the embryo. The nutrition of the embryo is arrested if the extravasation be extensive enough to interrupt the normal circulation through the imperfectly formed placenta, and the embryo may be found stunted and shrivelled, suspended by its umbilical cord from some part of the amniotic cavity. These extravasations of blood between the chorion and the decidua constitute the typical "apoplexy of the ovum" described by many authors. It is found in a multiplicity of forms and modifications, and is no doubt produced by a variety of causes. Thus it may be produced by faults in early development, or by any cause which produces detachment of the well-formed decidua from the uterine walls, or from rupture of its bloodvessels. Apoplexy of the ovum is a very common cause of embryonic death, and, judging from the large number of specimens preserved in the various museums, is by far the most frequent of all the pathological changes affecting the early ovum. Congestion of the decidua is, it is believed, a sufficient and adequate cause, irrespective of any other, to produce rupture of its bloodvessels and extravasation into its substance. Inflammation of the decidua, taking various forms, has been described by Virchow, Hegar, Schroeder, and Spiegelberg. Slavjanski has described an acute form associated with cholera in pregnant women, and leading to hæmorrhage with the death of the fœtus. These inflammations are, however, generally chronic, and are continuations or extensions of previously existing inflammation in the unimpregnated mucous membrane of the uterus, and three forms have been described as producing different alterations in the decidua.

I. The first, "chronic diffuse endometritis" of authors, produces a thickening or hyperplasia of the uterine mucous membrane, which when conception occurs renders it unfit for the reception and growth of the fecundated germ. According to Spiegelberg the hypertrophy consists in a development of connective tissue, which not only thickens but indurates the membrane, and extends down to the muscular fibres themselves. The arrangement of the hypertrophied tissues is such as often to give rise to the appearance of cysts, which, however, are probably only the "cups" of Montgomery enlarged. Schroeder regards it as a chronic and diffuse proliferation of the mucous cells, both parietal and reflected. The thickened membrane presents, he says, the large cells of the decidua, united *en masse*. By their proliferation, particularly in the deeper layers, they may produce a cavernous structure, and even form cysts. This alteration, he says, produces death of the embryo and abortion, by the irritation which the inflammation produces on the uterine nerves. A variety of this chronic diffuse endometritis constitutes the "adhesive endometritis" of Braun. It takes place in the later months, and it then attacks the utero-placental mucous membrane, setting up such irritation that it imperils the life of the fœtus and precipitates premature labour. Strictly speaking, the affection may be regarded as a disease affecting the placenta. One of its results is to produce adhesions between the placenta and uterus, and so complicate delivery. Its presence is characterised by the fœtal movements giving pain, and often, besides this, acute pain and tenderness are experienced in the walls of the womb, which some have described as "uterine rheumatism." It may be produced by chills, overwork, &c.; and, according to Kaschewarowa, it is one of the results of syphilis, or a pre-existing endometritis.

II. A second form of inflammation affecting the decidua has been described by Virchow under the name of "polypoid endometritis." It would seem to be only a more advanced degree of the inflammatory condition just described, but the mucous membrane is thickened to twice or thrice its ordinary depth, and prominences and projections like polypi protrude from the free internal surface.

III. A form of inflammation affecting the decidua has been named "catarrhal endometritis." It is characterised by a persistent discharge from the gravid uterus, which constitutes the "hydrorrhœa" of pregnant women. A woman, generally about the sixth month of pregnancy, loses suddenly and at intervals a quantity of transparent colourless fluid, analogous to ascitic fluid. This is succeeded by a dribbling more or less prolonged and without pain. The pregnancy may go on to term; and the membranes, as a rule, are found intact.

Discussing morbid changes in the chorion, Dr. Priestley remarked that the pathological change which has received the most attention is what is commonly called cystic, or vesicular, or hydatid degeneration. The literature on this subject is abundant, and was reviewed at length. As to the manner of the formation of the cysts, most authors agree in regarding them as the results of pathological changes of one kind or other in the villi of the chorion, but the crucial question, and one which has been much discussed, is whether the disease precedes the death of the embryo and so causes its death, or whether the embryo dies first and the disease is the consequence. On this point authors differ. Dr. Priestley gives his adhesion to the former theory. Alluding to the amnion, Dr. Priestley pointed out that it does not

always escape the effects of extravasation, beginning in the decidual structures. The condition which has received most attention in connexion with the pathology of the amnion is hydramnios, or superabundance of liquor amnii. The result to the mother is that she may suffer greatly from the distension. Respiration is impeded, and the patient may not be able to lie down night or day. The digestion is deranged from physical pressure, and the heart's action is disordered, while other secondary symptoms, such as œdema of the lower limbs and blueness of the countenance, may be superadded. The effect on the child is to impede its development, and, if born alive, it is commonly too feeble to survive its birth. Frequently the child is affected with dropsy, hydrocephalus, or other complication. Two or three facts have been distinctly made out in relation to its pathology. 1. Scarpa noticed a coincidence between this form of dropsy and the presence of twins. This has been fully confirmed by the observations of Winckel, McClintock, and others. 2. In pregnancies complicated with hydramnios, the child often presents some vice of conformation. Monsters are, in fact, common with this affection. 3. The children born with a superabundance of liquor amnii often present evidences of syphilis, and this whether they are born dead or alive. 4. Hydramnios is comparatively rare in first pregnancies as compared with others. 5. It is more frequent with female children than males. Of thirty-three cases collected by McClintock only eight were males.

The impression derived from a careful study of all the circumstances is, that hydramnios is not a product of inflammation of the amnion, as some have supposed, but that it arises sometimes from constitutional conditions affecting the mother, sometimes from local causes.

Clinical Lectures
ON
DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary, December 9th, 1886,

BY C. BELL TAYLOR, M.D., F.R.C.S.,
SURGEON TO THE INFIRMARY.

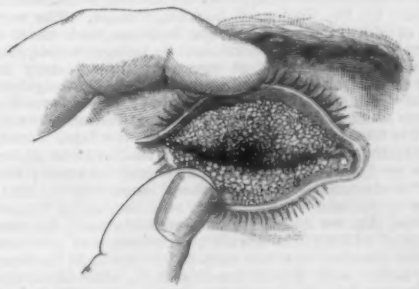
LECTURE V.

(Concluded from page 767.)

HITHERTO, gentlemen, I have been speaking exclusively of bacterial purulent ophthalmia—a disease which, so far as the infant and infection from the maternal passages are concerned, must occur within the fifth day of birth or not at all; and it is well that you should note this, because, of course, a baby may get a cold in its eye any time, just the same as you or I. Such accidents are, however, for the most part trivial, infrequent, and readily dealt with by the simplest remedies. It is different, however, when catarrhal ophthalmia attacks older children or adults living in common, in barracks, schools, reformatories, poor-houses, prisons, asylums, refuges, penitentiaries, and the like, where the inmates are often overcrowded and placed under defective hygienic conditions; for the disease, which is highly contagious—nay, more, under certain circumstances infectious,—spreads rapidly, is apt to assume what is termed the follicular form, to develop minute bodies beneath the conjunctival epithelium resembling sago grains,[1] and to culminate in that horrible, chronic, and intractable disease which we know as trachoma (τραχός, rough), or granular lids. These defective hygienic conditions, combined with filth, misery, and overcrowding, exist to a high degree in Egypt, the cradle of the arts and sciences, and, as Haller has remarked, "cæcorum in omni tempore fœcunda nutrix," where the cold nights, the heavy dews, the hot days, the glare, the flies, the atmosphere of dust, and periodic inundations, have rendered the disease endemic to such an extent that at one time there were as many as 8000 blind persons in the mosque at Cairo; and Volney, in his interesting "Voyage en Syrie," tells us that of 100 persons he met accidentally 50 were affected, 20 quite blind, 20 with films and discharges, and 10 with only one eye apiece. As might have been anticipated, the soldiers of Sir Ralph Abercrombie and Napoleon I., at the close of the last century, imported the disease into Europe, where it raged at one time to such an extent that 4000 British soldiers were blinded by it, 5000 French were in a similar plight, and 10,000 others had lost one eye apiece. In this disease the inside of the lid resembles a nutmeg-grater, a sliced fig, or a granulating wound (Fig. 2); and by constantly rubbing upon the cornea creates so much irritation, inflammation, vascularisation, and formation of protective tissue, that the patient is pretty nearly blind; and in some cases the cornea is so completely covered with a fleshy mass (*pannus*) that it is not possible to see the eye at all.

Here is a patient on whom I operated some years ago. He lost the right eye by an accident when a child, and when I first saw him the left eye was completely hid by a dense piece of flesh. I got rid of this by repeated inoculations with gonorrhœal matter, bringing into view an opaque cornea. There was, however, a small lancet of comparatively clear tissue near the margin, and opposite this I was lucky enough to succeed in forming an artificial pupil. The patient, who was formerly quite blind, I am thankful to say

FIG. 2.



has since had excellent sight, and has been for years able to manage an important business.

In dealing with granular lids and the catarrhal and follicular conjunctivitis which gives rise to it, we must remember that prevention is better than cure, and at once segregate our patients as much as possible. Let them live out of doors; teach them, as Arlt says, "that houses are only to sleep in." Banish, so far as possible, media of contagion. Let each boarder have his own towel, his own soap, and let them wash at the tap, for basins are dangerous. It is very seldom that better-class patients suffer from this disease; but when you are consulted by such persons, it is well, as a purely hygienic measure, to recommend migration for a time to some mountainous district, such as Switzerland, where the disease is unknown. With regard to treatment, I scarify the lids; squeeze out the sago grains; occasionally, but not often, excise the retro-tarsal fold, and apply liquor potassæ, sulphate of copper, or syrup of tannin (nitrate of silver as a caustic does not go deep enough), and deal with bad cases by peritomy and inoculation with ophthalmia neonati or gonorrhœa, or infusion of paternoster bean.

I have here a patient whose conjunctivæ were both completely destroyed by trachoma before I saw her (xerosis), and I have only managed to preserve a little sight by establishing an artificial ankyloblepharon in both eyes. We do not see many cases of trachoma at this institution, I am happy to say, but here is a small boy who is a characteristic example of a form of disease which, like the poor, we have always with us. This lad's mother informs us "that he is very subject to getting his nose stopped up," and "that at first they thought it was weakness which had fallen into the glands of his neck." On examination we find that the nostrils and upper lip are swollen, that the cervical

[1] Sattler says the disease is caused by a microzoon, which he calls the diplococcus of trachoma. It is a small ball, cleft by a tiny line, very like the gonococcus of Neisser, but it may be cultivated in various soils, whereas the gonococcus of Neisser can only be cultivated in the serum of the blood. Speaking on this point, Mr. Power, in his admirable lectures on Bacteriology, says:—"The diplococcus of trachoma has its seat inside the trachoma follicles, but outside the cells, not on the surface, but in the follicles of the conjunctiva; hence the method of squeezing, cutting, or scratching out the follicles is bacteriologically correct."

glands are enlarged, and that there is an eruption on the scalp and in the neighbourhood of the right auricle; in short, the boy has got eczema of the skin, and we need not wonder, under such circumstances, if he has also eczema of the conjunctiva, and that is precisely what is the matter: "phlyctenular conjunctivitis," or conjunctivitis scrofulosa, as it used to be called. There are two forms of this affection, the miliary and the solitary. The miliary phlyctens are scattered like grains of sand on the vascular limbus of the cornea, usually come on after measles or scarlet fever, and are masked by considerable general conjunctivitis. The solitary phlycten is about the size of a hemp-seed, is surrounded by a vascular zone, and marked by a small bundle of vessels which radiate outwards towards the equator of the globe. Both forms yield readily to the yellow oxide of mercury ointment, with general treatment, and it is only when the phlyctenular conjunctivitis becomes phlyctenular keratitis that you are likely to have any trouble with the case. Vesication and ulceration of the cornea, however, is a very painful process. Nerve terminals are exposed, photophobia is intense, iritis is sometimes set up, the constitution sympathises, the patient loses his rest, and the ulcers, even when healed, leave scars which may subsequently seriously interfere with vision. In these cases it is necessary to apply leeches, give mercury, put a seton behind the ear, and use hot belladonna fomentations. You will also find that an excellent plan of treatment is to open the anterior chamber with a broad keratome, so as to divide the vessels and nerves at the base of the ulcer. In this way tension is reduced, pain relieved, healing promoted, and the effect may be kept up by daily tapping of the aqueous with a blunt probe; while the ulcer, if obstinate, may be touched with the galvanic or thermo-cautery, after the method so successfully practised by Dr. Nieden of Bochum, Prussia. The worst forms of ulceration of the cornea, however, with which we have to deal are those occasioned by foreign bodies, often aggravated by attempts at removal. I constantly find pieces of corneal epithelium stripped off in the neighbourhood of a small speck that need not have been enlarged. In order to avoid this mischance, you will do well to take a hint from our friends the watchmakers, and use a lens. Fixed in the operator's orbit after the manner familiar to us all, both hands are free, and the foreign body may be readily lifted from its abnormal situation without increasing the area of injury occasioned by its impact. It frequently happens, however, that we do not see these patients until the cornea is clouded and infiltrated with the formation of pus in the anterior chamber, in which case the ulcer should be divided freely across with a thin Graefe's knife, after the manner recommended by Professor Saemisch.[2] Organised lymph and shreds of matter should be gently removed with forceps, and warm fomentations, antiseptics, and atropine or eserine, according to the situation of the ulcer, applied. The chamber may be reopened daily, so long as the pus re-forms, by a mere touch with a blunt probe, and an artificial pupil practised afterwards, if necessary.

When minute fragments of steel have penetrated the cornea, their presence may be demonstrated by this admirable instrument, the electro-magnet, for which we are indebted to Mr. McHardy, Professor of Ophthalmology at King's College. It is not often in these cases that the lens escapes without injury; but I recently extracted a piece of steel through a small incision from the anterior chamber with this fine bent conductor without the formation of cataract or any further damage to the eye. When the lens is wounded it swells, presses forward, and acts upon the iris both as a chemical and mechanical irritant. In these cases we must extract the lens, or if from the nature of the accident this is too great a risk to run, a piece of iris may be removed.

Sight, however, may be seriously affected without any loss of corneal transparency, by mere abnormalities of shape. The cornea may be too flat and the eye too short (hypermetropia), or too long (myopia), or it may be too convex (kerato-globus), or the refraction may differ in different meridians (astigmatism), or it may even project like a sugar loaf (kerato-conus). When the eye is too flat the patient can see at a distance, even through a convex glass; but vision with the naked eye for near objects soon becomes confused; in these cases we must prescribe convex glasses. In cases of astigmatism a combination of cylindrical and spherical lenses is requisite. Iridectomy, in some exceptional cases, is said to do good in kerato-globus, and I am in the habit of treating cases of conical cornea by touching the apex of the cone with the galvanic cautery. With one or two applications the aqueous escapes; the wound in healing, after the manner of burns, contracts; the normal curvature of the cornea is restored; and the cure is completed by making a pupil sideways, and, if necessary, tattooing the scar. With regard to myopia, it is very generally believed that because short-sighted persons can see minute objects with very imperfect light, and because they can read without spectacles at an age when most persons require such aids, that therefore short sight is strong sight. This, however, is a mistake. The vast majority of such patients suffer from permanent organic changes, which, increasing, may at any time damage or even destroy sight. Speaking on this subject, Dr. Williams, the eminent Professor of Ophthalmology in the Harvard University, the oldest University in the United States, says: "Very high degrees of myopia should be recognised as an infirmity deserving careful consideration before assuming the obligations of marriage; for those in moderate circumstances may well hesitate to choose partners, who, though highly cultivated, may probably at middle life become unable to provide for their households or care for their children."[3] Surely that is a serious disease. He adds: "Myopia is one of the gravest affections of the eye: capable of limitation by constant care during childhood and youth; but if not thus limited, likely to be a source of future disability and misery, and *to be handed down as an onerous inheritance to children.*"

Let me epitomise for your guidance a few facts relative to this very important subject. If short sight is not developed before sixteen years of age, it will not be developed at all; if it has not reached a higher grade than one-tenth by twenty, it is not likely (if care be taken) to increase. Higher degrees than this are an ever-present source of danger, disability, and frequent disaster. It is more likely to be developed in weakly children than in others, and frequently makes rapid progress in those who are recovering from illness. It is unknown among savage tribes and tillers of the soil, and is the direct result of a vicious system of excessive education, making its appearance first in the children at village schools in the proportion of about 1 per cent., in schools of higher grade 20 per cent., higher still 40 per cent. Not only the numerical ratio but the intensity of the disease is also increased in direct proportion to the hours spent in study, and the attention of the German Parliament has recently been called to the fact that in some districts where compulsory education has been longest in force, upwards of 50 per cent. of the inhabitants are affected. With regard to treatment, again I say prevention is better than cure; better indeed in this case, for cure is impossible. I see many of my eminent colleagues suggest desks, and fittings, and light arrangements, and props to keep the children's heads in certain positions; but, to my mind, desks and props and fittings do not meet the difficulties of the case. From five to fifteen is the dangerous age—the very period that the School Board have selected for their paternal ministrations; and if the eyes of a child between these ages begin to give way, there is no rational treatment but enforced absence from school; and I do not think myself that such compulsory holiday ought to be regretted by anyone, for children's brains do not grow in proportion to the stuff they cram into them; and, after all, true education is something that a man seeks for himself and finds for himself, and does not usually begin until long after school-days are over. Short-sighted persons, who must complete their curriculum of study for the Church, the Bar, the Civil Service, or other professions, should wear weak concave glasses for reading, so as to be able to hold print about twelve inches from the eye. The light should be good, and come from the back or side, and they should not read or work when lying down, leaning forward, or travelling in a railway carriage. "Seekest thou great things for thyself? Seek them not." To no class does this sage warning apply with greater force and justice than to the myope. Of two brothers, Germans, myopes, and students of medicine, one took heed of this warning, accepted a mediocre degree, and preserved his sight by an out-door life and country practice. The other heeded not, but worked on, and at last achieved distinction, only to find himself, shortly after middle life, unable to walk alone or recognise his fellows. Another condition that

[2] Handbuch der Augenheilkunde.

[3] Diagnosis and Treatment of Diseases of the Eye, p. 374.

you will find very much benefited by glasses occurs in patients of forty or upwards, who occasionally suffer from marginal blepharitis, the formation of styes, and a feeling of general worry about the eyes owing to reflex irritation from neglect of these aids to vision. Still another is that of chronic invalids, specially women suffering from uterine complaints, painful menstruation, and the like, who spend much of their time on their backs, who read in this unnatural position, and complain of pain and neuralgia whenever they use their eyes. In these cases, in the absence of any marked ametropia, I usually prescribe weak convex glasses combined with abductive prisms, and recommend graduated exercises after the plan first suggested by Dr. Dyer, of Pillsburgh, Pa.

Gentlemen, I have already pointed out to you the great danger of mistaking a slight case of iritis for mere surface irritation,[4] and neglecting to dilate the pupil; the equally great, if not greater, danger of using atropine if the case should be inflammatory glaucoma, a disease which you are so apt to mistake for iritis. I have dwelt on squint and cataract, and pointed out those cases where the eyeball must be extirpated, and those where, in my opinion, optico-ciliary neurectomy may be advantageously substituted. Let me close this brief and necessarily imperfect sketch by calling your attention to two other errors which I find very frequently committed.

Here is a boy who was sent to me by his surgeon to be treated for myopia, and in truth, on ordinary inspection, you might easily conclude that his imperfect sight was due to that cause; but if you dilate the pupil, or use the ophthalmoscope, you will see at once that he is suffering from congenital cataract. Bear in mind, therefore, that there may be considerable opacity of the lens which is not at all visible on ordinary inspection.

Some years ago I was sent for to operate upon a lady, the wife of a military gentleman of considerable social importance. Two surgeons and a physician were already in attendance, and I was informed that the patient, although advanced in life and very nervous, would prove a good subject for operation, as the cataract was fully formed in each eye. On examination, however, I found that the case was one of simple glaucoma; there was no cataract at all; and the time for beneficial treatment had gone by. Now you will avoid this latter error by remembering that a dusky pupil is quite a natural phenomenon in aged persons, and that it is not at all safe to conclude that, because this appearance is accompanied with failing vision, therefore the case is one of cataract. You must use the ophthalmoscope, or, failing that, trust to subjective symptoms. Of these the most important are limitation of the field and iridescent vision. You will find, if the case is one of glaucoma, that the patient cannot see to the inner or nasal side, or vision is very limited in that direction, and if he looks at a candle or artificial light it is surrounded by red and green colours. You will see what I mean if you will breathe on the glass and look at the street lamp outside. This is an early and significant symptom of glaucoma, and if it does not disappear on rubbing, is not accompanied by evident opacity of the cornea, and does disappear under the influence of eserine, you must be prepared to treat for glaucoma or call in the aid of an ophthalmic surgeon.

Gentlemen, when I was a student I was taught to contemn specialism, and my teacher was Mr. Syme. Now I look upon the late Professor of Clinical Surgery in the University of Edinburgh as probably the first surgeon of the century, and am therefore disposed to regard any opinion of his with exceptional reverence; in this, however, I feel sure he was wrong. Life is so short; art is so long. It is so human to err. You require to see so many hundred patients before you know how to treat one; you require to perform the same operation not only over and over again, but to be always at it, before you can ensure for your patient the utmost benefit that art can afford; so that I feel convinced that if science is to be advanced and humanity benefited, it will be mainly by gentlemen who devote special attention to special subjects, and who place the fruits of their labours at the disposal of the whole profession. It is in the fulfilment of that duty that I am here to-night; that I venture to offer you these few hints, and to assure you that I am highly gratified by your gracious acceptance of the same.

[4] See Lecture I. on the Use and Abuse of Mydriatics, THE LANCET, vol. ii. 1886.

A FORM OF ULCERATION SIMULATING LEPROSY.

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LAST year Dr. Hale White was kind enough to show for me at the Pathological Society[1] specimens from a case of peculiar ulceration which had been mistaken for leprosy, and admitted to the Trinidad Leper Asylum. Having now three more cases under my care, and not having found this condition mentioned in any article on the diagnosis of leprosy, I have thought that a few notes of these cases may perhaps be of interest.

CASE 1.—P., a Hindoo woman aged thirty-seven. Twelve years' history. The chest and extremities are covered with superficial cicatrices. Above the ankles the dark skin is replaced by light flesh-coloured patches, showing former deep ulceration. The thumbs are intact, but the fingers are strangely distorted. The general arrangement is this: The first phalanges are inclined forwards, the second backwards, and the last phalanges forwards again. The phalangeal joints are more or less dislocated; in some there is ankylosis, in others more or less limited movement. The left fore-finger is flail-like, and turned round to one side. The nails are filbert-shaped and slightly split longitudinally. The toes are curved downwards and are somewhat shiny. The toe-nails are worn away. There are superficial ulcers on the feet. There is no tache or anæsthesia anywhere. The toes are hyperæsthetic. No enlarged glands can be felt, and the bones are not markedly thickened. Chest sounds are normal. Magenta shows no bacilli.

CASE 2.—M., a Hindoo woman aged forty-two. Three years' history. The skin of the face and trunk is mottled, but there are no anæsthetic taches. There are old deep cicatrices on the dorsal and ulnar surfaces of the forearms, and over the left ulna are some long punched-out ulcers, exposing bare bone. The hands and fingers are very thin and wasted, but there is no ulceration, destruction of nails, or anæsthesia. On the front of the legs, upper surface of the feet, and left sole are old cicatrices and punched-out ulcers. Dead bone has been removed from shaft of left tibia. The toe-nails are intact, and sensibility is good. No enlarged glands can be made out, and the chest signs are normal. The patient is still extremely wasted, but has improved much since admission. Magenta shows no bacilli.

CASE 3.—D. J., a Negro aged forty-four. Five years' history. There are pale patches on the cheeks, joining beneath the nose; they are not anæsthetic. Trunk normal. The fingers of the left hand are partly ankylosed, the last phalanges being turned backwards towards the dorsum. On the extensor surfaces of the fingers are hyperæsthetic cicatrices. The third and fourth fingers of the right hand are also becoming distorted. The nails of both hands are long, intact, and more or less filbert-shaped. The finger-pulps are hyperæsthetic. Over the left external malleolus is a superficial ulcer about two inches long, nearly cicatrised. The toes are flexed, ankylosed, but not anæsthetic. Nails intact. There are scars on the dorsum of the right foot. Harsh breathing at left apex and nummulated sputum. Enlarged cervical glands on left side. Patient much wasted. Magenta shows a few bacilli in discharge from ulcer.

The main differences from leprosy are seen to be three:—1. There is no anæsthesia of fingers or toes. Indeed, in Cases 1 and 3 there is very marked hyperæsthesia. 2. There are no anæsthetic taches. In Cases 2 and 3 there is more or less leukoderma, but sensation over these patches is perfect. 3. There is no loss of phalanges or deformity of nails. In Case 2 the toe-nails are worn away, but this appears to be simply mechanical and very different from the destruction and deformity common in leprosy. The presence of bacilli in the last case is not to be wondered at, seeing that the patient is the subject of advanced phthisis.

The cause of this form of ulceration is obscure. On looking through the literature of tropical disease, it seems to me that this ulceration presents a remarkable analogy to the "parangi" disease of Ceylon as described by Gavin Milroy.[2] He says: "The characteristic features of the malady are diverse forms of skin disease, ulcerations of the surface in

[1] Path. Soc. Trans., vol. xxxvii., p. 344.
[2] Endemic Diseases of India (Fox and Farquhar), p. 95 *et seq.*

different parts, and frequently also affections of the bones and joints, leading on, in bad neglected cases, to emaciation, exhaustion, with much suffering and death. ..... Sometimes it exhibits all the appearance of inveterate lepra." He remarks also on its resemblance to some endemic forms of disease in the Western hemisphere, and Fox and Farquhar comment on its relation to Delhi sore and its allies. I would venture to suggest that the above cases are Western analogues of these Eastern diseases.

Trinidad.

ON SOME CLINICAL FEATURES OF GRAVES' DISEASE.[1]

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IT is far from my intention in this paper to dwell on the whole train of symptoms which go to make up the disease recognised under the name of exophthalmic goitre. I shall limit myself to certain features of the affection, illustrated by cases occurring in my own practice. Let me in the first place direct attention to the eye symptoms. They are three in number—viz.: exophthalmos; Stellwag's symptom, or retraction of the eyelids; and Graefe's sign, or loss of the coördinated movement between the upper eyelid and the eyeball, and thus if the globe is turned downwards the eyelid does not follow fully, but leaves a zone of sclerotic visible above the cornea. The relationship of these symptoms, and especially the latter two, to Graves disease is the question which I wish first to discuss.

Dr. Wilks, at the discussion on this subject at the Ophthalmological Society in May last year (1886), said that "increase of cardiac rapidity he regarded as a primary and necessary symptom; quickened cardiac action, combined with exophthalmos and emaciation, or with enlarged thyroid, he would regard as characteristic." The general experience seems to be that it is exceedingly uncommon for the cardiac symptoms to be absent. Trousseau and most writers believe that they preceded other symptoms. Graefe held a different opinion. It is not difficult, however, to find a reason to account for this diverse experience; for physicians would naturally be consulted in the first place by those in whom the cardiac symptoms were primarily pronounced, and Graefe by those in whom the first in order were the ophthalmic. At the same time Sattler, from the same standpoint as Graefe, says: "It belongs to the rarest exceptions for the cardiac palpitation not to form the first symptom." Sooner or later the eye symptoms make their appearance, and the constancy with which they occur is generally recognised, and their presence often regarded as pathognomonic. At the same time, cases have occurred in my practice which lend support to the belief that no infrequently the eye symptoms—and I mean especially the lid signs—occur among the early indications of the disease. It is also possible that their occurrence has been overlooked in cases where the observers, having failed perhaps to note the fulness of the globe, have not examined for less apparent lid symptoms.

A woman who is under my care, and whom I have introduced this evening, I take to be one of the character I have mentioned, with the early development of the characteristic signs of the lids. Her age is forty-five, and she saw me at the infirmary on Dec. 10th for the first time. Six months ago, after a severe headache, she first noticed anything unusual about her eyes. Then, as at the time of coming to the infirmary, she supposed it was the left eye that did not open sufficiently, and that the right was perfect. She has been a widow for eighteen years; the catamenia have been very irregular since then, and menstruation has been entirely absent for eighteen months or more. She has had a good deal of anxiety about the success of a son during the last twelve months, and has been "nervous." She does not admit that she is thinner than usual. Examination at once disclosed that the faulty eye was not the one the patient supposed. The left eye was normal, and only apparently more closed in contrast to the altered state of the right. On this (right side) retraction of the upper eyelid (Stellwag's symptom), causing a widening of the palpebral fissure, was present; also when the patient looked down the relation of descent between the eyelid and the globe was broken, and a zone of sclerotic left bare above the cornea (Graefe's sign). There was no real exophthalmos present; the widening of the palpebral fissure would account for any little apparent prominence. Vision in each eye was normal, $\frac{2}{2}$, and the eyes were free from disease; on the right side there was venous retinal pulsation. The thyroid gland was perceptibly enlarged, and the right side more so than the left; it had not, however, attracted the patient's attention. Cardiac symptoms were absent; pulse 80; "flushings" had not been experienced; and there was also an absence of the "flurried fussy manner" of a complete case of Graves' disease. Urine: sp. gr. 1020; no albumen; no sugar. Notwithstanding the absence of the third cardinal symptom and the monocular character, I do not see how this case can be regarded as otherwise than as one of exophthalmic goitre. It is possible the other symptoms may develop later.

Not long ago, too, a young woman came under my observation with the retraction of lids (Stellwag's sign) and also Graefe's symptom, with some amount of exophthalmos. The other symptoms were not marked; and though I was myself disposed to regard the thyroid as a little goitrous, it was at all events so little that others disagreed with me. Dr. Dyson saw her at this time, and she has been under his care since, and he has kindly consented to her coming here this evening, as the other cardinal symptoms have since developed. The patient has reminded me of the interesting fact that she did not come to the infirmary respecting her condition at all, but only accompanied a relative, and that I, noticing something about her eyes, examined her and found the condition I have stated. It had never attracted her attention before. The eye symptoms are more marked on the left side.

About a year ago, also, I saw a young lady with an absence of all symptoms of Graves' disease, except a nervous irritability, and that in the right eye Graefe's symptom, and especially Stellwag's, were both well marked. There was no exophthalmos. The left eye was normal. This case caused me at the time and since to reflect whether these symptoms may occur independently of exophthalmic goitre, or indeed in a case which does not actually pass into the train of symptoms recognised under that disease; especially, moreover, as in this case treatment affected more than it usually does in Graves' disease. Bromide of potassium was used without much benefit; but the constant current, with tonics and change of air, were followed by marked improvement. No other definite cause in the way of diseased teeth &c. was found. She remains now practically well at the lapse of ten months since discontinuing treatment.

A still more interesting case is that of a miner aged thirty-six, whom you have seen, and who is suffering from well-marked miners' nystagmus, the oscillations being both rotatory and of a to-and-fro character, and the movements being increased by placing the head in an oblique position, as well as by the other means that generally aggravate the oscillatory motions in the nystagmus of miners. The interest for our present purpose lies in the fact that there is also present retraction of the eyelids (Stellwag's symptom), rendering the sclerotic bare round the cornea, and very marked Graefe's sign. He appears, moreover, to possess some control over this condition, for he can lower the eyelids to the cornea and present an almost normal appearance; and this does not seem to bear any very exact relation to the nystagmus. The eye movements, though worse at some times and in certain positions, never cease. It is doubtful whether there is any real exophthalmos—probably not; nor can the thyroid be considered as enlarged. There is a complete absence of all other symptoms of Graves' disease.

At the discussion at the Ophthalmological Society Mr. Lang read an epitome of six cases in which unilateral lid phenomenon, without proptosis, was associated with no other evidence of Graves' disease except slight enlargement of the thyroid in two cases. In four, however, paresis of the orbital muscles was present. Dr. Hughlings Jackson mentioned also that he had observed Graefe's sign in a case with no Graves' disease. An immense number of cases of miners' nystagmus have at one time or other passed under my observation, but such an association of lid symptoms as witnessed in the case related is unique in my experience.

Fortunately, notwithstanding the degree of protrusion of eyeballs which in some cases occurs, sloughing of the cornea

[1] Read before the Sheffield Medico-Chirurgical Society, Dec. 23rd, 1886.

is a very rare occurrence. No such result has occurred in my practice, though two cases have come under my care in the infirmary—one not long after the suppuration had commenced, and the other only after the globes had become destroyed.

The first case was that of a young woman, unmarried, aged twenty-three, and she was admitted into the Fir Vale Workhouse on Nov. 14th, 1882, where our present house-surgeon, Mr. C. F. Coombe, saw her, whilst acting as resident medical officer to that institution, and he has kindly supplied most of the particulars which follow. At this time she presented well-marked enlargement of both lobes of the thyroid gland, with great prominence of the eyeballs. She had frequent attacks of very severe palpitation, and systolic bruits were heard both at the base and apex of the heart. During the next fortnight the exophthalmos increased considerably, and became so great that she could not cover the globes with the eyelids. Ulcers appeared on the cornea, spreading and assuming a sloughing character. On Dec. 2nd she was admitted into the Sheffield General Infirmary, under Dr. Bartolomé, and on the 4th was transferred to me. Shortly after admission she was attacked with erysipelas (facial), and died on Dec. 12th. No post-mortem examination was allowed. When she came under my observation both corneæ were extensively sloughed, altogether past recovery. No cause was assigned for the disease, but her condition from the first when under my care was such as to preclude the possibility of taking detailed particulars of her case.

The second instance was in a married woman aged forty. She was admitted into the Sheffield General Infirmary in May last (1886) with both eyeballs destroyed by sloughing of the corneæ. The thyroid gland was markedly enlarged; there was palpitation and a loud hæmic murmur (basic). There was the excitable nervous disposition met with in patients having Graves' disease, and "flushings" were likewise experienced. The eyelid symptoms were obscured as a consequence of the sloughing of the eyeballs, but Stellwag's symptom (retraction of eyelids) was undoubtedly present.

A remark occurs to me respecting the condition of the thyroid gland in these cases of exophthalmic goitre. Frequently one lobe is larger than the other, and in recorded cases in which the side is particularised, the right is the one referred to. Anatomists, however, state that the right lobe is normally larger than the left. Have clinicians borne in mind sufficiently the anatomical fact?

Monocular cases.—Generally speaking, Graves' disease is bilateral, though not unfrequently it is more marked on one side of the body than the other. Several cases are on record in which the eye symptoms have been confined to one eye. Dr. Hill Griffiths stated at the Ophthalmological Society that the eye symptoms in his thirty cases were bilateral in twenty-three instances; in four the right only was affected, and the left in three. In addition to the patient already referred to (No. 1), I have notes of two other cases.

The first occurred in a female, aged fifty-four, who consulted me in 1877. She suffered greatly from palpitation; pulse 150. Exophthalmos (right side); lids closed over the eyeball but not easily. Had only been married recently; her health was poor, and she had had a great deal of nursing; slept badly. Menstruation ceased a year ago. The thyroid gland was enlarged; my note does not say whether equally so, or whether one side was larger than the other. I only saw her a few times.

The next case was a domestic servant aged twenty-three, who was first seen in June, 1884. For three or four months the left eye was noticed to be prominent, and had been much worse during the last two months. The retraction of the eyelid (Stellwag's symptom) was well marked, and had been so for two months, the patient stating that the eye had been as wide open during that period as it was at the present time. The eye was prominent, and Graefe's sign, loss of coördinated movements in descent of eyeball and upper eyelid, was present. The eye was myopic; V = fingers, and was but little improved by any – glass. There was divergent squint; there were extensive choroidal changes in the region of the macula. She had been aware of the badness of vision with the eye for many years. The right eye was hypermetropic, and the symptoms present in the left were absent. She suffered a great deal from palpitation; there was a hæmic cardiac bruit, audible with first sound at base and into the neck. Goitre was present, and had only been noticed two or three weeks—not large but distinct, and, if anything, the right was the larger side. No shock or other apparent cause. Menstruation was frequent. She was introduced at one of our meetings some time after this. She remained under my care, and in the following November it seemed as if the right eye would also become affected; but it never did so. At the end of twelve months the following note was made: "She has been at Scarborough, and is in much better health. The prominence of the left eye is now very much less, but she thinks it is not quite as it was before the attack commenced. The right eye is quite good. No flushings now, nor palpitations. Has lost her nervousness. Catamenia regular."

A theory to be satisfactory must be able to account for the whole train of symptoms. The one that seems to fall in best with this condition is the central lesion theory brought forward by Sattler, and which has found in these islands a very able advocate in Dr. W. A. Fitzgerald of Dublin.[2] Briefly, Sattler assumes a lesion of the vaso-motor centre that presides over the vaso-motor nerves of the thyroid gland and orbital tissues, and it is inferred from the frequent association of goitre and exophthalmos that these centres must be close together. The cardiac symptoms he ascribes to lesion of the cardio-inhibitory centre for the vagus, and Graefe's symptom is explained on the assumption that there is a centre governing the associated downward movements of the eye and eyelids, just as the associated movements of both eyes. He coincides in Stellwag's opinion that the widening of the palpebral opening is due to a lesion of the reflex centres, which are set in motion by stimuli from the retina, cornea, and conjunctiva. The experiments of Filehne on the restiform bodies have given considerable support to this theory, these being the parts through which the nerve paths from the vaso-motor centres and vagal centres pass. In one case he succeeded in inducing the three cardinal symptoms, and in the others a varying association of the symptoms. Moreover, the interesting association of diabetes in some cases of Graves' disease is well known, and it is worthy of notice that the region described as the diabetic puncture is close to the vaso-motor area. Do not the cases referred to in this paper lend support to such a central theory? In other diseases we are accustomed to regard a lesion as spreading and gradually encroaching on contiguous areas, either by direct extension or by irritation of surrounding tissues. May we not, therefore, regard the cases in which the lid symptoms are among the earliest as instances in which the lesion has only affected the centres governing the coördinated downward movement of the globe and eyelid, with the lid reflexes generally closely associated, the other centres becoming implicated later on, with a consequent further development of symptoms? Or are there cases which stop at a lesion of the lid centres?

COLOTOMY FOR MALIGNANT DISEASE OF THE RECTUM, WITH NEARLY PERFECT CONTROL OVER THE ARTIFICAL ANUS A YEAR AFTER THE OPERATION.

BY HARRISON CRIPPS, F.R.C.S.,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

THE patient, a woman aged fifty, was kindly placed under my care at the hospital by Dr. Griffith. I am indebted for the following notes to Mr. Balgarnie, her dresser.

The woman was admitted on Dec. 15th, 1885. She dates her present illness from the spring, when she first noticed pain in the lower part of the back, and soon afterwards pain during defecation. The character of her motions gradually altered, becoming smaller in size, and at times flattened and generally tinged with blood. The frequency of her stools increased, at first to three or four times a day, but latterly much more often. She has been getting thinner, and at times has much severe pain, which she described as like "labour pains."

The patient on admission looked weak and anæmic, with a feeble pulse. She had nearly constant pain, and was much distressed by a troublesome diarrhœa, having to go to stool as often as ten or twelve times in the night. The act of defecation was very painful, and nearly always attended by loss of blood. On examination the anus appeared healthy, and on

[2] Dublin Medical Journal, 1883.

ntroducing the finger the mucous membrane for about three inches felt smooth and natural. The finger then came in contact with a mass feeling not unlike an enlarged cervix uteri. Around this was a cul-de-sac, deeper posteriorly than anteriorly. The mass itself was hard and nodular. The opening through it would only admit the tip of the finger, and the bowel at the constricted point was firmly fixed to the surrounding structures.

The patient, not wishing then to stay in the hospital, left, but was readmitted on Feb. 1st. She had become weaker, and her symptoms had increased since her discharge. The mass also had grown considerably, and could now be felt to be within an inch and a half of the anus. On Feb. 8th, 1886, the case being considered unsuitable for excision, lumbar colotomy was performed by Mr. Harrison Cripps. The various layers between the skin and the lumbar fascia were purposely not divided on quite the same level, and the opening in the fascia was considerably above that in the skin, so that the bowel when drawn out ran obliquely for a short distance between the skin and the fascia. The wound united by first intention. No motion passed through it for a week. During the next six weeks a certain amount of fæces passed through the rectum as well as through the wound. This gradually ceased, and when she was discharged in March everything passed through the artificial anus. She improved very much whilst in the hospital, and was comparatively free from pain.

April, 1887.—The patient is not only alive, but wonderfully improved; and notwithstanding that the local growth has made some advance, her general health and strength is far better than it was a year ago. She is no longer troubled with diarrhœa, but has one good motion daily through the artificial anus, and she has been able to attend as usual during the year to her domestic duties. The artificial anus readily admits the forefinger, and the mucous membrane is exactly on the level of the skin. There is no sign of cicatricial tissue round the orifice, which is perfectly soft and dilatable. The patient knows when she is going to pass a motion, which she has the power of controlling, there being no involuntary escape. In fact, the patient herself says she is no more troubled with the artificial anus than when the opening was in the natural situation. The patient was shown at the Medical Society.

After carefully watching a large number of cases of rectal cancer, in some of which colotomy had been performed, while in others nature had been allowed to take its course, I do not hesitate to pronounce strongly in favour of the operation. The relief to the symptoms is very marked, the constant diarrhœa and tenesmus which forms so frequent and distressing a complication being entirely relieved. The downward course of the patient is certainly made far easier, and the miserable termination of life by obstruction or perforation prevented. Moreover, I feel confident that the progress of the growth is retarded in consequence of the bowel acquiring physiological rest by the cessation of its function. That the rapidity of malignant growth depends much on the activity and consequent blood-supply of the organ affected admits of no doubt, and as an example may be instanced the relative rapidity with which cancer grows in the breast of a pregnant or suckling woman. So that, apart from life being indirectly prolonged by the relief which colotomy affords to distressing symptoms, I feel confident that the growth itself is often retarded, and rendered comparatively quiescent when the rectum is placed at rest by the operation. Colotomy is in no sense a rival operation with that of excision. Excision is doubtless the proper operation when the disease is within easy reach and still confined to the walls of the rectum, thus admitting of a free and complete removal. Such favourable conditions are, however, unfortunately exceptional, the disease either having commenced too high or spread too far by the time the case has come under observation to admit of local interference. The practical question that arises is as to what period in the course of a case of rectal cancer colotomy should be performed. In answering this question, I am in complete accord with Mr. Reeves, who advocates the performance of the operation so soon as symptoms of stricture become prominent. The troublesome diarrhœa, pain, tenesmus, and blood-stained discharge owe their origin far more to the retention of scybala above the contracted part than to the actual disease itself. To wait until the unfortunate sufferer is at death's door, worn out by the constant discharge, or by the actual occurrence of complete obstruction, is not only to have deprived the patient of the benefit of the operation, but to perform it at a time when it becomes a dangerous procedure. The operation, if performed before the patient is much reduced in strength, has but little risk; indeed, I can say in my own practice that I have hitherto had no death as the immediate result of the operation when performed for malignant disease. It is essential, if the patient is to derive full benefit from the operation, that care should be taken to prevent the opening from contracting. It is of great importance, with this view, to get union of the bowel with the skin by first intention. If this occurs there is little or no tendency to contract. On the other hand, if the bowel falls away from the skin the granulating tissue with which the interval is occupied is nearly sure to contract on healing. In one case in which I recently operated half the benefit was lost from this cause, for, on seeing the patient two months after the operation, the opening would barely admit the finger. If there is any tendency to contraction, it is best prevented by allowing the wound to heal over a full-sized plug. I regard it as a great advantage to make the opening through the abdominal walls as valvular as possible, and this is best accomplished by making the incision through the skin considerably lower than that through the fascia. If the opening is made in this way, and care taken during the healing process to prevent contraction, the patient will have little or no difficulty in managing the artificial anus. In the case recorded, the part was perfectly clean, the patient had one motion daily, and had control over the bowel, while she was able to do her daily work without annoyance of any kind.

Stratford-place, Oxford-street, W.

EXTIRPATION OF RUPTURED UTERUS.

BY E. C. ANDREWS, B.A., M.B., B.C. CANTAB., &c.,
SCHOLAR OF ST. JOHN'S COLLEGE, CAMBRIDGE, AND SENIOR OBSTETRIC RESIDENT AT GUY'S HOSPITAL.

ON September 12th, at 5.30 P.M., one of the extern midwifery attendants was called in to attend the fifth labour of Mrs. S——, who was said to have had pains for twenty-four hours. She was a delicate woman of short stature and her previous confinements had all been normal. Vaginal examination showed the os fairly dilated, membranes unruptured, and the vertex presenting resting on the pubes. The pains were of medium frequency, and apparently those of the first stage of labour. At 6.30 P.M., the pulse being then about 120, the membranes ruptured, and the pains increased in force and frequency, culminating about 8 P.M. in exceedingly strong expulsive efforts, which affected the progress of the head but little, if at all. Immediately after these the patient complained of intense pain in the stomach, there was marked collapse, and all labour pains ceased.

I was now summoned to the case, and found the patient nearly pulseless, pale, and exhausted, but quite conscious, and the head on the brim of the pelvis and rather movable. Recognising the urgent necessity for immediate delivery, I directed the abdomen to be well supported by the extern, introduced the long forceps, and proceeded to deliver the child. No difficulty was experienced in the introduction of the blades, and but very gentle traction was required. Fearing that the perineum might rupture, I withdrew the forceps as soon as the head was well down upon it, but instead of expulsion taking place, the head receded into the vagina. I again applied the forceps, and delivered without further difficulty. The child was a large one, weighing 9½ lb., was stillborn, and the delivery was followed by a gush of blood, though the uterus appeared firmly contracted. After waiting a few minutes, finding that the placenta did not come away, I introduced my hand and found that it passed through a rent in the uterine wall into the abdominal cavity. Following up the cord with my fingers, I discoverd the placenta in the abdominal cavity above the uterus, and removed it without difficulty. An injection of two-thirds of a grain of ergotine was now administered. The pulse was quite imperceptible and the patient apparently dying. An hour later the patient had rallied considerably; the pulse was 140, of fair force, and there had been no further hæmorrhage from the vagina. About 10.30 P.M., however, the pulse was much feebler, and coils of intestine had come down through the rent into the vagina.

In the temporary absence of Dr. Galabin, I consulted with my colleague, Mr. A. E. Price, and we agreed that the patient's only chance lay in the immediate performance of abdominal section. Ether was accordingly administered, and, with the assistance of Mr. Price and Mr. F. R. B. Bisshopp, I proceeded to open the abdomen by an incision in the median line extending from a quarter of an inch below the umbilicus to a quarter of an inch above the pubes. Each layer was in turn divided on a director until the peritoneal cavity was reached, and then, passing my hand downwards and to the left over the surface of the uterus, I found a large, ragged tear in the left and front of the organ, while the abdominal cavity contained a very large quantity of blood. The position and extent of the rent, together with the extreme laceration and thinning of its edges, determined me to remove the entire uterus and appendages rather than attempt to unite the tear with sutures. I accordingly lifted the uterus out through the abdominal wound, placed a double ligature round both broad ligaments, and divided them. Then carefully clamping the cervix below the rent, I transfixed the pedicle with a needle and tied each half with a double ligature, afterwards carrying one of the ends round the whole stump. Cutting through the pedicle above the clamp, I now removed the uterus. The peritoneal cavity was sponged out as completely as possible, and the pedicle brought forward and fixed with harelip pins to the lower end of the abdominal wound. I then closed the upper part of the incision with wire sutures, and applied the usual gauze dressings. During the whole operation, which lasted three-quarters of an hour, there was but very little hæmorrhage, and during the earlier stages the patient's condition was all that could be desired. Towards the end, however, she gradually sank, and died soon after the operation was completed.

Subsequent examination of the uterus showed the organ to be of the normal size after parturition, and weighing roughly twenty-four ounces. The rent extended from the attachment of the upper part of the left broad ligament vertically downwards to the lower third of the cervix, and then passed transversely across the anterior cervical wall to the right side, its total length being nearly six inches and a half. The edges were much lacerated and very thin, and in the surrounding tissue there was a good deal of blood extravasated. The placental site was on the fundus and posterior wall, and the muscular tissue was firm and well contracted, showing a healthy structure on microscopic examination. In the right ovary there was a characteristic corpus luteum of pregnancy, and in the left two minute cysts.

As far as I am aware, the uterus and appendages have not before been removed for a rupture of that organ. I have stated above the reasons which led me to prefer this operation to any attempt to sew up the tear, though I opened the abdomen with the intention of doing so. Immediately after delivery the patient appeared to be sinking much too rapidly for any operative interference to be attempted. As my notes show, she rallied from the shock, but only to sink again from hæmorrhage into the peritoneal cavity as soon as the reaction was well established. That this hæmorrhage was the fatal factor in the case I have not the least doubt. Not having a serre-nœud at hand, I had to make use of an ordinary ovariotomy clamp, but I feel sure that the former is much the more suitable instrument. In conclusion, I believe that such an operation as I performed gives a chance to an otherwise hopeless case, and that it should be undertaken without hesitation under such circumstances.

Prince Arthur-road, N.W.

A REMARKABLE CASE OF COMA DUE TO MALIGNANT PUSTULE (ANTHRAX).

BY F. J. REILLY, L.R.C.P. ED., M.R.C.S.

ON Tuesday, April 12th, at 9 A.M., I was sent for to see Mr. H. I. S——, residing in Hackney. I found him in bed, totally insensible and convulsed. His case presented some of the appearances of irritant poisoning, such as vomiting, head fixed rigidly backwards, and the muscles of the trunk and limbs having tonic and clonic spasms. The breathing was stertorous, and he was totally unconscious, with insensitive conjunctivæ. On careful examination, I found his temperature was 105°; pulse 140, soft and compressible. I also found on the nape of his neck a dark livid black spot about the size of a threepenny-piece, with hard base 2½ in. by 2½ in., and then came to the conclusion that it was blood-poisoning of the most virulent character. I then wired to Dr. Angel Money, who kindly came directly and suggested an operation of removing the whole of the affected part at the nape of the neck, which I immediately did; this operation relieved the patient's convulsions considerably, but he died five hours after in coma. There was no albumen in the urine and no sugar, and nothing to suggest either Bright's disease or diabetes. The patient had never been ill in his life. He had been at business on the previous Saturday. In the evening he played whist with his friends, about a mile from his own residence, partaking of a hearty supper, and then walked home between 12 and 1. He went to bed and slept well. On Sunday morning he took his breakfast as usual, and was only noticed to complain of feeling chilly. He wore an overcoat, and did not put on his collar because of the "boil." Took his dinner, and in the evening amused his children by reciting. He went to bed and remained there until 4 P.M. the following day, when he got up and came downstairs complaining of great prostration. He returned to bed at 7 o'clock, and all night was most restless. At 6 A.M. he got up and made some tea, took a cupful and gave his wife one; at 8 A.M. he got out of bed and fell down from what I consider to be syncope. He so far recovered from this to get back to bed without assistance; becoming insensible, I was then sent for, and found the condition above stated.

The most important feature about this case is that Mr. H. I. S. was a tanner, employing about seventy men, and his long experience made it important that he should superintend the sorting of hides, which he did on Saturday, and it is not unreasonable to suppose that from this source the contagion was contracted. The Government ought at once to take some steps, now that anthrax is so prevalent amongst animals, to make an immediate order that all their skins and carcases should be cremated. Dr. Angel Money took the portion removed away, promising to mount and examine for bacillus anthrax. A preliminary examination has demonstrated the presence of a few short rods having the characters of the bacillus in question.

Victoria-park-road, Hackney.

NOTE ON EXTEMPORISED INHALERS.

BY THEODORE MAXWELL, M.D., B.Sc.

FEW practitioners who have been in the habit of employing inhalations in diseases of the respiratory organs would willingly give them up for all the draughts and mixtures that have been invented. Why, then, do so few prescribe inhalations? Probably because the use of the various instruments in vogue is attended with inconvenience, and the patients, as a rule, object to wearing a hideous and uncomfortable semi-mask or to lean over an earthenware jug with a mouthpiece for some time each day. In some cases, too, as with chloride of ammonium, the inhalers to be had are both cumbrous and expensive. A little ingenuity will enable the practitioner to obviate many of the objections to prescribing medication in this form. For example, is it desired to inhale the vapour of a few drops of volatile liquid, such as creasote and ether dissolved in spirit? Take a piece of indiarubber tubing about three-eighths of an inch in diameter, and two inches and a quarter in length; cut out three-quarters of the circumference of the middle third; there will then be left two tubes, three-quarters of an inch long, joined by a mere band also three-quarters of an inch long. Roll up a little strip of blotting-paper, and insert into each of the tubes. This will absorb from three to five minims of liquid dropped into each tube. All that has then to be done is to bend the apparatus into the form of a U, and insert it into the nostrils, the indiarubber band resting against or below the bridge of the nose. The patient should inspire by the nose and expire by the mouth. This is, in fact, a simplified—may I say an improved—form of Cozzolini's inhaler mentioned in THE LANCET of March 19th.

Again, chloride of ammonium vapour is simply invaluable in winter cough with so-called asthma, a few puffs from the apparatus described and figured by Dr. Kendal Franks in

THE LANCET of January 22nd being frequently sufficient to afford immense relief; but this apparatus (Vereker's), as well as another of Lee's, is cumbrous, and too expensive for poor patients. Besides, such goods are not to had in ordinary chemists' shops in country towns. The apparatus itself may be improvised with three wide-mouthed bottles and a few pieces of glass and indiarubber tubing; the difficulty about the Y-shaped tube, which only a practised glass-blower can make, can be got over by leading the ammonia and hydrochloric acid separately into the wash-bottle, whose cork must thus have three holes. The gases combine quite as well in the water, or after they have passed through it, as they do in the leg of the Y-shaped tube. But there is a much simpler plan still, which can be extemporised in any surgery in two minutes. Remove the piston and cork from a glass syringe (male or female); the larger the better; tear, so as to fit the tube loosely, four pieces of sponge; damp them; insert one down to the end; put, say, a dozen drops of strong hydrochloric acid on the second, and push it down near the first; then insert the third, which is simply damped; on the fourth drop, say, a dozen minims of dilute solution of ammonium, insert it, and finally a perforated cork. Tell the patient to smoke the "patent cigar" from the nozzle for five minutes. If the sponges have not been too tightly rammed in, there will be no difficulty, and the peculiar white cloud will issue from the mouth or nostrils at each exhalation. I find it necessary to explain to patients that the "smoke" is not merely to be sucked into the mouth, but drawn deeply into the chest. This "patent cigar" can be used by several patients successively in the surgery, but the charge will not last long. After use, the sponges may be withdrawn with an old pair of dressing forceps, and recharged when required again, as the sponge containing the acid soon gets spoiled; pumice-stone or asbestos is better. Before letting a patient inhale, the "cigar" should be cautiously tried, lest either the acid or the ammonia should be too strong.

Woolwich Common.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

GUY'S HOSPITAL.

TWO CASES OF COLOTOMY FOR MALIGNANT DISEASE.—FRACTURE OF THE TIBIA DUE TO NECROSIS.—REMOVAL OF FOREIGN BODY FROM THE ANTRUM.

(Under the care of Mr. BRYANT.)

THE cases in which colotomy was performed present very good examples of forms of disease in which the employment of this operation gives very great relief from the more urgent symptoms and also prolongs life, the malignant disease being no longer in a constant condition of irritation, and growing less rapidly. It is rare to find fracture of the tibia due to necrosis, and not unfrequently the condition of the parts compels amputation. The fourth case shows the necessity of careful inquiry and examination where these sinuses may possibly be due to a foreign body.

Recto-vesical fistula due to malignant disease; colotomy (two stages); pins used. (From notes by Messrs. E. Deane and A. G. W. Bowen.)—E. P——, aged forty-six, was admitted on January 18th, 1886. Has had very few illnesses, and gives no history of any intestinal trouble or inflammation; she is married, but has had no children; she has had one miscarriage. Nearly four years ago she noticed that she had trouble with her urine, which she passed frequently and in small quantities, accompanied with great pain. A few weeks later she noticed fæces in the urine, during micturition the stream would be stopped by lumps of fæces which came away like pieces of string. She also noticed that she passed flatus per urethram. During this time she had much difficulty and pain in passing her motions, which were smaller than normal, never exceeding the diameter of the forefinger. The menses became irregular about six years before admission, and ceased entirely between four and five years ago. On Dec. 24th, 1885, the patient lost a large quantity of blood, the flow commencing from the vagina and afterwards coming from the rectum as well; previous to this she had very severe pain in the lower part of her body, and a good deal of slimy matter was passed with the motions. She complains of a good deal of pain in her back and loins. She has lost flesh considerably of late, and cannot sleep well owing to pain and having to get up frequently to pass urine. More fæces pass in the urine on straining or taking severe exercise, or when the bowels have not been open for some time. She says she passes white fibrous-looking lumps in the urine as well as fæces. Urine slightly acid; sp. gr. 1018; contains a small quantity of lithates, albumen, and pus, but no blood or sugar.

Jan. 21st.—On examination per vaginam, the uterus is found to be fixed and slightly flexed forwards. On examination per rectum, nothing very definite can be reached by the finger, but it seems to just reach a hardish, nodular, movable mass.

27th.—She is quite certain that fæces are still passed per vaginam, but none can be found in the urine.

29th.—The patient complains of very severe headache, with occasional shivering fits and sore-throat. Five grains of quinine were given.

Feb. 3rd.—With the aid of the microscope numerous pus-cells and some epithelial cells can be seen in the urine, which has a distinctly fæcal smell.

11th.—Condition of urine not improved.

12th.—Chloroform having been given, Mr. Bryant made an oblique incision three inches in length and about two inches and a half above the crest of the ilium on the left side, dividing fat and muscles down to the transversalis fascia. The bleeding was then stopped by twisting a few small vessels. The bowel was then inflated with air, and on dividing the fascia a large coil of bowel presented through the wound. This was fixed there by passing two long hare-lip pins through the integuments below, transfixing the colon through rather more than half its diameter, and passing out through the integuments above the wound; the bowel was not opened. The posterior end of the wound was then closed by two silk sutures, and the whole dressed with iodoform gauze and terebene oil.

13th.—A grain of opium was given last night. The patient was sick several times after the operation. She complains of a good deal of pain around the wound. The discharge had soaked through the dressings, which were renewed. Fomentations over abdomen, containing equal parts of tincture of opium and belladonna liniment.

15th.—The pain was less and the fomentations discontinued. Wound looking well; dressed to-day. Urine still contains pus. Patient has passed flatus and fæcal matter since the operation.

17th.—The bowel was opened to-day with a tenotomy knife. The patient experienced no pain then nor later when the needles were withdrawn.

20th.—The patient complains of flatus still coming per vaginam when she passes urine.

March 1st.—Nearly clear-coloured urine; a deposit of mucus; only a trace of albumen; very few pus-cells.

3rd.—Flatus has not passed through the vagina since last week, but there is still a little discharge per anum.

11th.—There is a red circular area around the aperture of the wound, about an inch wide from its circumference to its edge.

15th.—The redness has entirely disappeared.

On the 17th there was some pain during micturition. Flatus and fæcal matter had ceased to pass per vaginam. A colotomy belt was ordered on the 22nd, and she left much improved on the 31st. Her last report three months ago was satisfactory.

Malignant growth of pelvis (sarcoma?) involving rectum: colotomy. (From notes by Messrs. Bindley and C. J. Fuller.) C. L——, aged twenty-six, a clerk, was admitted on May 21st, 1885. The patient states that his father died of dropsy and his mother of cancer. Has one brother and three sisters; one of his sisters was operated upon by Mr. Bryant for periosteal sarcoma of the lower jaw fifteen years ago. He enjoyed fairly good health until May of last year; he then suffered from hæmorrhoids for two or three

months. Since Christmas he has had diarrhœa badly. During the last two or three days he says that he has felt a burning pain at the anus, and that mucus and blood have passed.

Examination on admission.—On examination per rectum the anus was found to be unduly patent; in front of the rectum, in about the situation of the prostate and base of bladder, was felt a firm, smooth, hard, painless mass, encroaching upon the calibre of the gut, but not completely obstructing it. On passing the finger towards the left side this mass was found to be continuous with a similar mass filling up the left side of the pelvis, and apparently firmly attached to the left ischium. Behind the rectum the concavity of the sacrum could be felt apparently quite free. On passing to the right side of the central mass the pelvis was found to be occupied in the same manner as the left side, but to a less extent, and, upon pressing upwards with the finger here, tenderness was elicited. The rectum was found to contain liquid strong-smelling fæces, but no blood; one or two small solid portions of fæces were also felt; further, from the wall of the rectum small pedunculated soft masses about the size of small grapes could be felt; the interior of the bowel otherwise was quite smooth, the abdomen was slightly distended, and a hard, irregular, painless mass, dimpling on pressure and apparently fæcal, could be felt in the left iliac region; there was a little gurgling, too, on palpation.

May 22nd.—To have a grain of opium every six hours.

26th.—The patient having been prepared and anæsthetised, an incision about two inches and a half long was made halfway between the last rib and the crest of the ilium, the muscles and fasciæ cut through, and all bleeding arrested. Mr. Bryant then introduced his finger and felt the kidney with the bowel in front of it; this was difficult to bring to the front on account of the great number of adhesions; it was, however, inflated and brought out, when it was found to be of the normal thickness of wall. On this account, instead of being put through the bowel, the stitches were introduced, one towards the front through an appendix epiploica and three on the other side through a transverse band. The wound was then stitched up on each side of the bowel, a piece of which, to the extent of about an inch and a half, was left protruding. The wound was then dressed with oiled lint and padded up with iodoform gauze, and the patient put carefully to bed.

27th.—The patient feels very comfortable, only a slight tightness across the abdomen. Urine acid; sp. gr. 1025; no albumen. Morning temperature 102°.

28th.—Was sick last evening and in the night; he cannot keep down his iced milk; no pain in abdomen or wound. Morning temperature 100·4°. The opium pills were repeated. Sedative bismuth mixture ordered three times a day, and port wine, barley-water, milk, and lime-water allowed.

29th.—He was very sick early this morning, but this has ceased; he lies with his hands clasped over his head. Respiration chiefly thoracic; the abdomen, however, moves slightly. He complains of tenderness over the epigastrium, and a griping pain as soon as he takes anything to eat or drink. Around the wound there is a slight red blush; has suffered much from hiccough. Pulse 92, fair volume. Complains of a feeling as if the abdomen was being screwed up. He is now taking a little weak brandy-and-water.

30th.—Wound dressed to-day. There is a little discharge. The stitches were not taken out. Has had no hiccough last night or to-day. Respiration thoracic.

June 1st.—Bowel protruding nicely from wound; granulating healthily. One stitch was removed on each side, and the bowel opened with a small narrow scalpel. No anæsthetic was given, and the patient felt nothing of the operation. The handle of a scalpel was then introduced, and some portions of light-coloured fæces were removed.

6th.—Patient seems comfortable,; there is still a great deal of discharge.

19th.—Wound again dressed; there is still some discharge both from the anus and the colotomy opening.

July 28th.—Patient discharged.

In July, 1886, this patient was comfortable, and there was not much evidence of the local disease having progressed. The Sister of the ward has just heard of his death.

Syphilitic necrosis of tibia: fracture at this spot; sequestrotomy. (From notes by Messrs. Deane and D. J. Jones.)—A. B——, aged fifty-three, was admitted on Oct. 28th, 1885. Five years ago an ulcer appeared in the upper part of the sternum, which broke and then healed up; soon afterwards she had an ulcer on the left shoulder, which was soon cured; six months later she had a tumour on the dorsum of the tongue. The tumour disappeared, under treatment; but she continued to take the medicine for some months. About two years ago two ulcers came on the front of the leg, one above the other, midway between the knee and the ankle. She applied a lotion. In a short time the two ulcers joined, and they have been getting deeper since. Last week she got up from a chair to walk across the room; as she did so, she felt something in her leg crack, and was unable to walk a step.

On admission there was great enlargement of the left leg beneath an old ulcer; above and below the ulcer the skin was clearly defined, dipping down along the margin of the ulcer; there was a mass of black necrosed bone at the bottom of it. The bone was broken completely across at the seat of necrosis. There were scars of old ulcers on the sternum and left clavicle, and slight scarring on the soft palate and pillars of the fauces. Urine normal.

On Oct. 31st Mr. Bryant enlarged the wound, and, finding the sequestrum loose, he removed it in two pieces. The cavity left was found lined with granulation tissue, which was wiped away; the lower end of the upper fragment of broken tibia was also freshened by chiselling off a small portion. The antero-external surface was quite black from exposure, and hollowed out from gradual disintegration of its substance. Elsewhere the surface of the sequestrum was irregular and worm-eaten. There was very little production of new bone in the neighbourhood of the sequestrum. It was two inches and a quarter long, and the antero-external surface was one inch in breadth. The limb was put up in a posterior and two-side splint, as in a simple fracture.

Dec. 7th.—Wound dressed; two small pieces of bone (compact tissue) taken away.

15th.—Patient would not stay in the hospital, so the leg was put up in a plaster-of-Paris bandage, a window being cut in the bandage so that the wound might be dressed. There seemed to be firm bony union between the two ends, and the granulations were healthy-looking. At a later period the woman reported herself as well.

Sinus of right cheek following the impaction of slate pencil in antrum four years previously; removal of foreign body; cure. (From notes by Messrs. Price and J. Aynard.)—M. C——, aged sixteen, a pupil teacher, was admitted on July 16th, 1885. When quite young the patient had several blows about the cheek; to this her medical attendant attributes her present complaint. About three years ago patient's friends noticed that when she laughed there was a curious retraction of the skin about two inches below the right eye. On looking, they found a small hard lump about the size of a pea, which seemed to be attached to the bone, but evidently was also attached to the more superficial structures. On consulting a surgeon, she was told that if the first molar were removed she would probably get rid of her trouble. After the removal of the tooth cotton-wool was placed in the cavity; when this was taken out next day it was saturated with discharge; the discharge continued for a day or two. Seven weeks ago the patient was operated on. A small elliptical incision was made, and a lump about the size of a pea with the depressed skin was removed; the skin was then separated from the muscle beneath, and the edges of the wound stitched together. On admission she presented the same appearance as she did before the operation, the only difference being that the lump with the depressed skin around was smaller.

Under chloroform Mr. Bryant passed a probe through the small sinus, and felt what he thought was bone, then another probe was introduced and held in. The lip was now everted and pulled up by means of retractors; then the mucous membrane was divided, and some bone was removed with a chisel, and the superficial and deep structures were separated from the bone right up to the probe. Incisor forceps were now used to extract what turned out to be the top of a slate pencil; several other pieces were removed. A probe was next introduced where the pencil was taken from, and a communication with the orbital cavity was found. A plug of iodoform gauze was then introduced into the hole. On being asked about the pencil, the patient said that when quite young she fell down with a pencil in her hand, and it ran into her cheek.

On July 28th the patient left the hospital, the face being still swollen. Within two weeks, however, she was quite well.

MANCHESTER ROYAL INFIRMARY.

ACUTE TRAUMATIC SUPPURATIVE OSTEOMYELITIS OF THE HUMERUS; EARLY EMPLOYMENT OF THE TREPHINE; RECOVERY.

(Under the care of Mr. THOMAS JONES.)

For the following notes we are indebted to Messrs. Walker and Platt.

James C——, aged eleven, a half-timer in a foundry, was admitted into the infirmary on Nov. 20th, 1886. Father dead; cause of death unknown. Mother, one sister, and two brothers living and healthy. The patient himself bears no indications of any hereditary disease. On Nov. 11th he fell on his left shoulder. When he got up he was able to move his arm, and could put his hand on the top of his head. He had a good deal of pain at the time, and his arm has continued to pain him ever since. Next morning he went to his work, which consists in knocking off the rough pieces on iron castings with a hammer and chisel; and in the afternoon he went to school, but whilst there was sick, and had to go home. The pain was much worse that night, and three days later a medical man was called in, and on his advice a mustard plaster was applied to the shoulder, without any relief. The pain was of a shooting character, and began to increase in intensity about 6 P.M.

On admission the left shoulder was œdematous and very hot to the touch; there was a very tender spot on the inner side about the coracoid process, and here fluctuation was very distinct. The whole arm was swollen, tender, and red, and the subclavicular fossa effaced. Urine: sp. gr. 1020; alkaline; no albumen; no sugar; deposit of mucus.

On the 22nd the temperature of the right shoulder, taken by the surface thermometer, was 99°; of the left shoulder, 102·2°. The patient was put under chloroform, and an incision made on the front of the arm just below the junction of the upper epiphysis with the shaft. A considerable amount of pus was evacuated, and a piece of rough bone could be felt with the finger lying immediately to the outer side of the bicipital groove. A drainage-tube was inserted, and the wound dressed with iodoform and a wood-wool pad.

During the next three days the wound discharged very freely, but the temperature continued very irregular; so on Nov. 26th an exploration was conducted by Mr. Wright, who found the shaft of the humerus quite separated from its upper epiphysis. Some counter-openings were made, and the cavity syringed out with an antiseptic sublimate solution (1 in 3000) and drained. There was no improvement either in the local or general condition, the evening temperature reaching 102°, and even higher. On the 30th he complained of a very tender spot on the outer aspect of the arm, an inch and a half above the external condyle. There was very little spontaneous pain in the limb, but when handled intense agony was experienced. The lad at this time presented a dusky appearance, and had a short distressing cough and a most rebellious diarrhœa. He was again anæsthetised, and a vertical incision an inch and a half long made over the tender spot; the incision was carried down to the bone through infiltrated and œdematous structures, and the periosteum found to be thickened and easily stripped off, but there was no pus beneath it. The bone was then trephined, and about a teaspoonful of pus escaped, the suppurating medulla being at the same time exposed. The upper incision previously made was now enlarged downwards; the periosteum here was extensively separated from the bone, but there was no pus between the two. The trephine was again employed, and the medullary canal laid open. While this was being done, some thick pus oozed up into the wound. The medullary tissue between the two trephine holes was then removed, the canal washed out with the perchloride solution (1 in 4000), and a drainage-tube passed through it, its ends projecting from the upper and lower wounds. The same night he complained of intense pain in his arm, which was being irrigated with the sublimate solution (1 in 5000), but after a subcutaneous injection of a quarter of a grain of morphia he passed a very fair night.

The next morning the patient was much better; his temperature fell to normal, and the limb, although still swollen and œdematous, was free from pain unless handled. The piece of bone from the lower trephine hole was eroded and eaten away on its inner surface until the part was translucent. The pus was evidently making its way at this spot, which corresponded with an area of intense tenderness. After the trepanation and clearing out of the medullary canal the temperature gradually fell, and kept down for about a week, except on Dec. 3rd, when there was a slight rise owing to a block in the drainage-tube. On Dec. 8th, the temperature again began to rise, and the next day the patient was placed under the influence of chloroform, the drainage-tube removed, the medullary cavity syringed out, and a piece of solid rubber catheter placed in the lower sinus. The temperature continuing to rise on the 11th, the patient was again put under chloroform, and the upper end of the diaphysis was discovered to be quite loose, soft, inflamed, and infiltrated with pus. The epiphysis moved smoothly in the glenoid cavity, and the latter was apparently quite unaffected. The diaphysial extremity had been causing much annoyance and pain, so about an inch of it was removed. The wounds were dusted over with iodoform, and the sublimate irrigation continued. After this operation the temperature began to fall, and came down nearly to normal. The medullary canal was syringed out daily, and on the 21st the irrigation was discontinued, the wound being dusted over with iodoform and covered with a wood-wool pad. The medullary canal soon began to fill up with granulations, and by Jan. 15th, 1887, it became impossible to force any fluid through it. The temperature about this time on more than one occasion rose to 102°. There was nothing local to account for it, nor did the lad's general condition indicate anything going wrong, it having been steadily improving for at least ten days. His appetite was remarkably good, and, except when the arm was moved, he complained of no pain whatever. The piece of catheter in the lower opening was removed on Feb. 1st, and its removal did not occasion any rise of temperature. The discharge from this sinus steadily decreased. The granulations in the upper openings were exuberant and painful when the dressings were renewed. In the centre of the original opening there remained a distinct sinus, which led down to some dead bone. On Feb. 12th he was again anæsthetised, the sinus was enlarged, and a small sequestrum removed from the upper end of the diaphysis. The prominent painful granulations were scraped away at the same time, and the several surfaces dressed as before. After this, the patient's temperature remained normal, the arm was dressed every other day, the discharge visibly diminishing.

The patient left the infirmary on Feb. 26th, with two sinuses, the original opening and the trephine-hole still discharging a little. His condition at the present time is much the same, a small amount of pus escaping from the two sinuses. The arm is thicker than its fellow, from the large amount of new bone which has been formed by the periosteum; the shoulder and elbow joints are quite movable, and the boy has more than regained his original state of health.

Remarks by Mr. JONES.—It is not often that cases of osteomyelitis are seen in hospital practice at this early stage. The disease was no doubt induced by the injury, and commenced close to the upper epiphysial line of the humerus. It promptly produced a solution of continuity in this situation, and at the same time travelled downwards in the interior of the shaft. This mode of propagation is not so often observed as the upward, while we see it in the tibia when the acute affection commences in the upper end of the diaphysis of this bone. What guided me in the diagnosis of implication of the interior of the shaft was the non-appearance of improvement after the persistent abscess had been freely laid open; the lad maintained the same dusky aspect, and complained bitterly whenever the arm was touched. I was induced to perforate the humerus in the spot mentioned by the intensity of the pain produced by pressure being greater here than elsewhere; also in other and similar cases I have observed that Nature made an opening in this situation. Had we waited long enough, an exit for the suppurating marrow would have been established here as the condition of the circle of bone clearly proves. Meanwhile, however, the acute illness would have continued, and it is very doubtful whether the system would have been able to withstand the strain put upon it. What I did then was to anticipate and assist Nature in her efforts. It is a remarkable fact that the shoulder-joint remained intact throughout, although the disease was raging in its immediate vicinity. Indeed, we are told that a portion of the epiphysial junction is actually within the capsule of the scapulo-humeral articulation. This can scarcely have been the case in this instance,

otherwise the joint would not have remained so free from disease. It will be noticed that at the spot where the humerus was trephined there was no pus between the periosteum and bone, showing clearly that we ought not to wait for this before resorting to a perforation. To my mind, the clinical features of acute osteomyelitis are alone quite sufficient to warrant us in forming a diagnosis, and when once this is done, it is our duty, and without delay, to perforate the bone and drain the medullary canal after removing its contents. Nothing short of this treatment will suffice, and by adopting it early we should save the patient an immense amount of suffering, if not from actual death, besides diminishing the risks of a tedious necrosis. When the acute process subsides, a chronic change will generally go on for some considerable period, the bone becoming sclerosed and leaving unmistakable traces of the disease, which will have an important influence on its future life history. The case I have narrated is almost the exact counterpart of a historical case which occurred in the Manchester Infirmary nearly 120 years ago, and in which Charles White is supposed to have excised the shoulder-joint, but where in reality he removed the upper end of the diaphysis, which had become separated from the epiphysis, the patient recovering with a movable joint, and where the entire motion of the limb was preserved.[1]

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Dislocation of Hip. — Disease of Humerus (? Osteitis Deformans or Osteomalacia).—Fibrous Metaplasia of Bone.

AN ordinary meeting of this Society was held on Tuesday last, Dr. R. Douglas Powell, F.R.C.P., Vice-President, in the chair.

Mr. A. A. BOWLBY showed a specimen of Congenital Dislocation of the Hip, removed from a girl aged thirteen who died in St. Bartholomew's Hospital from a new growth in the stomach. She was the first child of the family. The labour was easy and natural, no interference being necessary. Nothing was noticed amiss till she began to walk; and lameness was but slight until about the age of three years. There was no history of accident, and none pointing to hip disease. An examination showed that the head of the right femur was displaced on to the dorsum ilii. In the position of the normal acetabulum was a triangular depression, which, although it evidently represented the acetabulum, was far too small to have accommodated the head of the bone at any time. The floor of the depression was covered on its upper part by cartilage, and its edges were scarcely raised above the level of the surrounding bone. The upper portion of the acetabulum, that formed by the ilium or the iliac segment, was deficient, and the cavity was formed by the junction of the pubic and sciatic portions. The head of the bone rested in a depression on the dorsum ilii immediately above the deformed acetabulum, and was in this situation surrounded by a fibrous capsule. The ligamentum teres was undeveloped. It is probable that this condition of the acetabulum is a more frequent cause of congenital dislocation of the hip than is generally allowed, and there are no good reasons for believing that such displacements are the result of injury during parturition.

Mr. LOCKWOOD showed two Fœtuses, both of which had Developmental Peculiarities of the Hip-joints. One was a stillborn microcephalic fœtus at about the full time; it was the sixth and last child. Its parents were very healthy. The midwife said that it was born a "double breech" presentation. The other five children are alive and healthy. The thoracic and abdominal viscera of the fœtus were normal. The skull was very bony and microcephalic, and the spine had a very well-marked lateral curvature. The brain only filled a small portion of the skull, and had no convolutions; it looked like a fibrous vascular bag. The cerebellum was exceedingly deficient and had the same appearance. The spinal cord was unusually thin, and reached as far as the lumbar region. The fingers were crumpled up into the palms of both hands, and the feet were in the position of talipes varus; moreover, the legs assumed a crossed position. The hip-joint possessed no rim, and was merely a shallow hollow. The head of the femur was not displaced. Mr. Lockwood thought that since the brain and spinal cord of this fœtus were so decidedly abnormal, and since the organs of volition were affected, and not the viscera, there was therefore some association between the two sets of conditions. The various histological specimens of the embryo showed that the margin of the acetabulum was formed in cartilage before the second month of intra-uterine life. This process seemed to have failed in this case. The second fœtus was born of healthy country parents. It was not the first child. It was delivered by Mr. Allen, who says that it was a breech presentation. After birth the legs had a curious tendency to remain flexed upon the abdomen. The fœtus had ectopia of the abdomen, with protrusion of the liver and intestines. In other respects the viscera of the chest and abdomen were quite natural. The brain and spinal cord were well grown and normal. The hands were flexed upon the arms to a right angle, and upon the right side there was no thumb, and upon the left a very rudimentary one. The head of the right radius was dislocated upon the front of the humerus. The margins of both acetabula were deficient, and the heads of the femora, instead of lying in their usual place, were displaced upon the dorsum of the ilium. Mr. Lockwood thought that in this case the absence of the margin of the acetabulum had predisposed to the dislocation, and the muscles had, during intra-uterine life, drawn the head of the femur upwards. The cases were compared with ordinary cases of congenital dislocation of the hip, and it was argued that the cases which went by that name were seldom, or perhaps never, traumatic, but due to developmental effects. He thought that in intra-uterine life physiological movements of the limbs were an essential element in the proper development of joints.

Mr. W. ADAMS exhibited two dried specimens from the museum of the College of Surgeons which belonged, in Professor Stewart's opinion, and in his own, to the class of Congenital Displacements of the Hip. Mr. Bowlby's case was, Mr. Adams said, of special importance, because it was accompanied by a trustworthy history, which was absent in all the other specimens in London, with one exception, which was that shown by Mr. Morgan. This specimen had been shown to the Westminster Medical Society by the late Mr. Edwin Canton (*London Medical Gazette*, N.S., 1848, vol. vi., p. 559) as an example of "congenital dislocation of both hip-joints." As the specimens exhibited proved, the head of the femur in these cases was displaced in various directions, directly upwards, upwards and forwards, upwards and backwards towards the sciatic notch, or on the centre of the dorsum ilii. All the specimens agreed in showing no trace of disease; but, on the other hand, the innominate bone was evidently congenitally deformed. The acetabulum was represented only by a flattened triangular depression, the base of which was formed by the border of the obturator foramen; while the apex corresponded to a point a little above that which should represent the centre of the acetabulum if that cavity were present. The upper half of the prominent border of the acetabulum, which should naturally be formed by the ilium, was entirely absent; so that there was nothing to prevent the head of the femur passing upwards on to the dorsum ilii when the weight of the body was thrown on the limb. In all these specimens the lower part of the innominate bone was narrowed and elongated; the ischial tuberosity was everted, and its ramus twisted; the head of the femur was smaller than natural, generally flattened behind and below, but covered with healthy articular cartilage; the round ligament was occasionally present, being greatly elongated; and the head of the femur remained within the capsule ligament, which was not only elongated, but thickened. The collection of specimens would help to dispel several errors; for it would be seen that the condition was really a consecutive displacement of the femur resulting from a congenital deficiency of the acetabulum, rather than a true dislocation. Two practical results were the outcome of these views. In the first place, the accoucheur must be freed from all possible blame in producing the displacement or so-called dislocation; and, secondly, the practice of dividing the tendons of the glutei and rotator muscles must be condemned as an irrational and useless procedure.

Mr. J. H. MORGAN exhibited a specimen from the Charing-cross Hospital museum, which was of historical as well as

[1] Particulars of this case were read before the Royal Society on Feb. 9th, 1769, and are recorded in C. White's "Cases in Surgery." London, 1770, p. 57.

pathological interest, as being the first specimen illustrating the condition of parts found in congenital dislocation of the hip. It was exhibited to the Westminster Medical Society in March, 1848, by Mr. Canton. The patient was a female, aged thirty-two, who was affected in both hips. She died fourteen days after giving birth to a living child at full term. Examination of one hip only was permitted. The body and upper limbs were well formed, whilst the lower extremities were somewhat atrophied. The head and neck of the femur were found on the dorsum ilii, the former having passed beneath the small external rotators, whilst a large bursa existed between the latter and the capsular ligament which immediately covered the former like a hood. This ligament preserved its natural connexions, but was considerably elongated, thickened, and strongly fortified with supplemental bands at its upper part. The head of the bone was coated by a bluish film of cartilage, which was continued over a superficial impression, marking the site of the pit for the ligamentum teres, which was not present. The portion of the dorsum ilii played upon by the femur was smoother than natural. The acetabulum was triangular in form, the base directed outwards; the height one inch, the breadth half an inch; the cavity was nearly filled with fat. Mr. Morgan remarked that although specimens exhibited that evening placed it beyond doubt that in some cases an erroneous development of the acetabulum occurred, and the head of the femur was thus forced to make for itself a socket upon the dorsum ilii, he believed that there were other cases in which inflammation of the synovial membrane occurring at or soon after birth, rupture of the ligamentum teres took place, and the femur was pushed out of the acetabulum, and drawn up on to the ilium. The appearances in the specimen which he exhibited were quite compatible with this view. He had had an opportunity of seeing this condition in a case under Dr. Barlow at the Hospital for Sick Children in Great Ormond-street, where the femur became dislocated in the course of rheumatic fever; and on cutting down upon it, the head of the femur was found thus displaced, covered by the stretched but unaltered capsule, and forming for itself a new cavity, in which it rotated. The acetabulum was filled to a level with its margin by granulation tissue. In two cases which had lately come under his observation, presenting all the clinical features of congenital dislocation, he had detected the marks of small abscesses, which very possibly had resulted from some such course of events.

Mr. SHATTOCK said that his specimen was precisely like that of Mr. Bowlby's. In Mr. Lockwood's specimens there was evidence of a strict intra-uterine malposition. He had dissected cases of what Volkmann called "genu recurvatum," in which the knee was over-extended. In a healthy individual either the hamstrings must rupture or a subluxation of the hip would occur if this faulty position were assumed.

Mr. D'ARCY POWER showed an ancient specimen, said to have belonged to Mr. Stanley, 1834, who had presented it to the museum of St. Bartholomew's Hospital.

Mr. HOWARD MARSH said it was still doubtful whether the dislocation of the hip might not be due to injury during labour. Mention was made of a case of back presentation, in which the dislocation might have been due to violence during delivery. He did not think that such violence was the usual cause of this "congenital dislocation." The condition doubtless varied slightly in different cases. As a rule, the joint appeared to be rudimentary, so far as it could be ascertained by external examination. Dupuytren had put hereditary cases on record. He mentioned a case in which the mother was similarly affected. This supported the view that an original defect must have been transmitted.

Dr. T. BARLOW supported the contention that some cases might be inflammatory in their origin. He referred to the case of a child one month old, in which there was a purulent swelling over the buttock, with considerable mobility of the hip-joint. Another abscess occurred in one of the joints of the foot, and the case was probably pyæmic. It had many of the characters of a congenital dislocation of the hip; the acetabulum was rudimentary, and oval in shape, and filled up by solid connective tissue; the head of the femur was swollen and spongy. The capsule was very large. The abscess communicated with the hip-joint. There was no sign of ulceration or caries, and Mr. Barker believed the abscess was secondary to the condition of the joint. A committee of the Pathological Society contended that it was a case of early arthritis which produced the condition of the acetabulum found. He rather supported this view. In early arthritis the ultimate changes were different from those found later in life. The power of formation of connective tissue was so great that union and healing might go on to a surprising extent, so that we might hardly suppose that an inflammation had ever been present. In cases of extensive bone lesions resulting from syphilis, the signs of actual inflammation might be very slight after the lapse of some time. We should not expect the final results of inflammatory disease in early life to show the same signs of destruction and caries as would be found in disease occurring in later life. In cases of dislocation occurring during fevers, without abscess, the anatomical appearances might be somewhat like those found in the congenital dislocation of the hip.

Mr. R. BARWELL considered that by far the greater number of congenital dislocations were due to malformation of the acetabulum, and a few to malformation of the head of the femur. He said that in some cases division of muscles could effect considerable improvements.

Mr. EDMUND OWEN had seen a case of breech presentation with congenital dislocation, in which neither the midwife nor the doctor had arrived before parturition. He did not think the condition of the hip-joint was a dislocation, but was due to the faulty position described by Mr. Shattock.

Mr. BOWLBY said that cases due to previous inflammation were separable from cases of so-called congenital dislocation.

Mr. J. R. LUNN showed a specimen of an obscure form of disease affecting the Humerus of a man aged eighty-six. Three months before his death it was noticed that the right arm was becoming curved outwards and was tender; no other bones were affected. There was no history of syphilis, gout, or rheumatism. The bone, when examined after death, was curved obtusely about the middle; the thickening was greatest where the bone was most curved, the bone regaining its normal dimensions at the ends. The bone was softened, the medullary canal at the curvature narrowed, and the cancellous tissue at this point tough and compact. The shaft above was rarefied, and the cancellous tissue within the tuberosity and neck deficient, the enlarged portion of the medullary canal being filled with fat. Mr. Shattock found that the curved portion of the bone showed, on microscopical section, well-formed osseous trabeculæ, including a vascular connective tissue; in parts, large osteoclasts lay against the trabeculæ, and there was abundant evidence that these had been altered in direction. In most of the spaces ossification was in active progress, and in places "brushes" of stiff osteogenic fibres spread into the new bone as "perforating fibres." New bone was also in process of formation in a dense, fibrous, connective tissue in the deeper layer of the periosteum. Mr. Lunn, after commenting on the difficulty of diagnosis and the improbability that it could be classed with osteitis deformans, owing to the fact that only one bone was implicated, expressed the opinion, founded on the microscopical appearance, that the case was an example of osteo-malacia affecting a single bone.

Mr. SHATTOCK read a note on Fibrous Metaplasia of Bone. He showed macroscopical and microscopical specimens of the femora of well-known cases of osteo-malacia: Howship's, from the Royal College of Surgeons; and Solly's, from St. Thomas's Hospital museum. Neither of these had been previously examined by the ordinary histological methods now in use. That the rarefaction was not due to osteitis was proved to the naked eye by there being no trace of osteo-plastic periostitis; and microscopically the evidence was still more weighty, for there was no hyperæmia, and any small-celled infiltration was entirely absent. Moreover, in both cases the disease was progressing at the time of death, and caused death at the ages of thirty-five and thirty-nine. The specimens showed all stages of a direct conversion of the osseous substance into fibrous tissue. As Mr. Savory said, bone was but calcified fibrous tissue. In osteo-malacia the bone was unmade and reconverted into fibrous tissue. In Howship's case there was a distinct interval between these two processes. In the process there was sometimes to be seen the lacunæ enlarging and coalescing, as described by Durham in the Guy's Hospital Reports. The decalcified matrix, by its fibrillation, was converted into fibrous tissue. The connective tissue might become replaced by fat from infiltration of its corpuscles, and so there was, as Sir James Paget had described, a fatty degeneration. The term degeneration usually indicated that the tissue lost all its physiological functions. When one physiological tissue

results from another physiological tissue the process should be termed, after Virchow, "metaplasia," rather than degeneration. In museum preparations the spirit often had an acid reaction. In one case of spina bifida, amongst other acids, sarcolactic acid was found by Dr. Bernays, and probably resulted from muscular tissue. The presence of this acid might lead to a certain degree of decalcification, and prove a serious source of fallacy.

Dr. A. H. ROBINSON showed the Calvaria and one of the Clavicles from a case of Osteitis Deformans. A large sarcomatous tumour connected with the left lobe of the cerebellum, removed from the same case, was also shown. The patient was a clerk, aged fifty-two. He had never been intemperate, nor had he suffered from rheumatism or syphilis. There was no history of cancer in his family; his twin-brother died an imbecile. He was father of a family of ten children, his wife having had no miscarriages. Two of the children died of scarlatinal dropsy, at eight years of age, and were said to have very large heads, resembling in form their father's. One of the patient's brothers died at the same age, and suffered similarly, his limbs being much distorted. The patient's symptoms dated back ten years, beginning with pain in the back and weakness in the lower limbs. His left tibia was the first bone observed to be enlarged, and the head afterwards began to enlarge rapidly. The right femur and humerus then became thickened to almost double their normal diameter; for some months prior to his death, which occurred quite suddenly, he was bedridden. At the necropsy the left side of the heart was found to be hypertrophied, and the right dilated, the organ weighing fourteen ounces. There was no valvular lesion. The lateral ventricles were distended with serous fluid. To the left lobe of the cerebellum a large round-celled sarcoma was found adherent, probably springing from the membranes. There were no growths elsewhere in the body. The section of the skull showed hypertrophy, chiefly on the right side and in the occipital region, with complete obliteration of the sutures and disappearance of the diploë. A portion of the outer table was removed at the vertex, and showed a condition of rarefaction beneath. The thickening of the clavicle was confined to the inner two-thirds of the bone.—Mr. D'ARCY POWER said there was no thickening of the medullary canal, and considered that the specimen shown by Mr. Lunn was one of osteo-malacia, not osteitis deformans.—Mr. MACNAMARA said that there were different classes of osteo-malacia, as, e.g., those occurring in pregnancy and the specimens presented to the meeting. In some specimens there were evidences of distinct sarcomatous tissue which filled the medullary spaces. In cases of rheumatic arthritis the bony trabeculæ may simply have disappeared, owing to deficient activity of the osteoblasts, which allowed only of the formation of fibrous tissue. In osteo-malacia there was progressing softening, but in osteitis deformans a hardening and thickening process occurred also.—Mr. LUNN, in reply, agreed that there must be a softening stage as well as a thickening one.

The following card specimens were shown:—Mr. Lockwood: Development of the Hip. Mr. Adams, Mr. Morgan, and Mr. Shattock: Drawings of Congenital Dislocation of the Hip. Mr. E. H. Fenwick: Tumour of the Bladder. Dr. Willcocks: Congenital Malformation of the Heart. Mr. Shattock: Tubercular Disease of the Skin. Dr. Dakin: Atrophied Kidney and Dilated Ureter from a female child aged two. Dr. Colcott Fox: Infantile Scurvy.

MEDICAL SOCIETY OF LONDON.

Treatment of Hæmorrhage from the Tongue.—Catheter and Calculi removed by Lithotrity.—Renal Sarcoma in Infancy; is Surgery justifiable?

AN ordinary meeting of this Society was held on Monday ast, Dr. Hughlings Jackson, F.R.S., President, in the chair.

Mr. LOCKWOOD read a paper on a mode of restraining Hæmorrhage during Operations upon the Tongue. After speaking of the serious nature of that accident, the various plans which had been devised to prevent it were mentioned. None of these seemed to be quite free from objection, although all were more or less efficacious. After discussing the anatomy of the lingual artery, it was concluded that, at the place where the vessel lay upon the side of the pharynx near the greater cornu of the hyoid bone, the depth of tissues was so small that there could be no difficulty in compressing the vessel. The great constancy of the course of the vessel lent itself to this proposal. Forceps were then described which had been devised after a great many experiments upon the dead body. These instruments were quite efficient in preventing the passage of thin injection through the lingual artery. They were so arranged that one blade passed by the side of the tongue into the pharynx, whilst the other was bent to fit the contour of the lower jaw and meet the other near the tip of the greater cornu of the hyoid bone. Dissections had been made after the forceps had been adjusted which showed that the artery was tightly grasped and impermeable. A case was then described in which Mr. Lockwood had removed half the tongue whilst the forceps were in position. The tongue was split down the median septum and then removed with scissors. The lingual artery did not pulsate or bleed, and the operation was rapid and bloodless. Other cases were then described in which Mr. Willett had used the forceps; and, in conclusion, it was thought that there was a sufficient amount of evidence to show that the lingual artery might be easily and safely compressed.—Mr. F. BOWREMAN JESSETT thought that in limited disease of the tongue the forceps would be unnecessary, and when the glands were infiltrated the lingual artery should be ligatured as a preliminary. In such cases the instrument would be in the way.—Mr. MARMADUKE SHEILD said in rare cases of accidental wound of the posterior part of the tongue the instrument might be applicable.—Mr. SPENCER WATSON thought there would be no difficulty in applying the instrument to any jaw.—Mr. BOYCE BARROW thought ligature preferable to compression of the artery.—Mr. W. PYE referred to the feeble power of the forceps.—Mr. LOCKWOOD said that the ideal was to get cancer of the tongue so early that neither the whole of the tongue nor the submaxillary glands should require removal.

Mr. H. H. CLUTTON read a case of Catheter and Calculi removed by Lithotrity from a man aged twenty-nine, a groom by occupation, who was sent to Mr. Clutton by Mr. John Powell of Weybridge in September, 1886, on account of the following symptoms. Ten weeks previously a kick from a horse had ruptured his urethra. He was treated in a country hospital by a catheter tied into his bladder, and left in three weeks with the wound healed. He subsequently sent for Mr. Powell on account of the occasional passage of small calculi and inability to pass water. In using the catheter for his relief Mr. Powell found a calculus in his urethra and thought he felt another in his bladder. On admission into St. Thomas's Hospital he was found to have a fistula at the peno-scrotal angle, a stricture of his urethra, and a calculus in both places indicated by Mr. Powell. Under ether the stricture was dilated by Otis's urethrotome and a lithotrite introduced. During the manipulation small pieces of a black French catheter were found adhering to the jaws of the lithotrite, and eventually the fragments of a catheter, thirteen inches in length, were removed. The man lost all his bladder symptoms, and left the hospital perfectly well. He had, however, a small fragment in the urethra in a pouch behind the stricture, but he would not allow a second operation. Three months afterwards he reported himself as so well that he would scarcely permit an examination to be made. On further questioning after the operation, he gave the following history. One night in the country hospital, after a small catheter had been tied into his bladder, he was sitting on a bed pan and suddenly felt a sharp pain in his bladder as if he had been struck violently just above the pubes. He called the nurse and declared that the catheter had slipped into his bladder. She assured him this was impossible, and pointed to the bone end still adhering to the orifice of the urethra. The house-surgeon next morning, failing to find any evidence of the catheter, passed a larger one and tied it in. The mechanism by which a catheter may slip up into the bladder, or so far into the urethra as to be with difficulty withdrawn, was discussed.—Mr. E. H. FENWICK had had three cases recently in which the catheter was removed from the bladder by lithotrity. A case of a foreign body—an ear of wheat—was mentioned as having got into the bladder per urethram; it led to a calculus, which was removed supra-pubically.—Mr. W. PYE said that good rubber would be unacted upon by acid or alkaline urine.

Dr. ANGEL MONEY made a communication on the subject of Renal Sarcoma in Infancy, and specially discussed the question whether surgery was justifiable. He briefly related four cases that he had observed at the Hospital for Sick Children. All the cases had the characters of a renal

tumour, and in all the enlargement of the abdomen was the first clinical sign. Hæmaturia occurred in none. All the cases were females, and the ages ranged between eighteen months and thirty-four months. The other kidney was unaffected in each case. One tumour probably began in tissues not strictly renal. One was evidently of supra-renal origin, and in this case there was enlargement of the external genitals, on which an enormous growth of hair had taken place during the last nine months of the life of a female child aged twenty-one months at death. All the tumours were large, and abutted against the diaphragm. There were secondary deposits in three cases, and in the fourth the mesocolon was infiltrated as well as the retro-peritoneal glands. Dr. Money gave the statistics of Leibert from the *Jahrbuch für Kinderheilk.*, Band xxi., p. 276. Of fifty cases, both kidneys were affected only twice; twenty-six of the cases occurred under the age of three years. The course of the case was always longer as the age of the child was greater. A study of recorded cases in which nephrectomy had been performed seemed to show that life was not prolonged, even in the successful cases, and the statistics proved the dangers that attended the operation. So that, in his work on the "Treatment of Disease in Children," he summed up the present situation by saying that removal of the tumour is useless. Doubtless, if the tumour were detected when small, a chance for surgery existed, but, as a rule, the tumour was not discovered till it had reached a great size and secondary growths were almost inevitable.—Mr. MARMADUKE SHEILD thought they might be removed if small.—Mr. BERNARD PITTS said that the last case might have been suitable for operation. Cases seen early would be favourable for operation.—Dr. HUGHLINGS JACKSON asked what operation would be done.—Mr. F. B. JESSETT said the question of diagnosis was the difficulty.—Dr. ANGEL MONEY, in reply, said that so far operation had proved useless, but he hoped that surgery would show a better record in future, though this could only be by the physician's diagnosing the cases early.

HARVEIAN SOCIETY.

THE meeting on March 17th was occupied by the consideration of the subjects of Hereditary Syphilis and Habitual Constipation in Children.

Case of Hereditary Syphilis.—The PRESIDENT (Mr. Edmund Owen) showed a girl aged fifteen years, the subject of hereditary syphilis. She had first come under his care ten years ago, when she had an ulcerated gumma in the groin, and ulceration and sloughing of the soft palate and tonsils. She was then also the subject of symmetrical deafness of corneitis, and of inflammation of the upper epiphysis of each ulna and tibia. It was then ascertained that, when six months old, she had undergone a course of treatment by grey powders. Mr. Owen prescribed three-grain doses of iodide of potassium in plenty of water three times a day, under which treatment all the symptoms rapidly cleared up. A year later the child was again brought with an ulceration of the tonsil, which quickly yielded to the iodide; she had also periostitis of the shaft of the ulna, which ended in suppuration and in the exfoliation of a surface layer of the bone, which was shed in the quiet way so characteristic of syphilitic necrosis in childhood. After eight years' absence the child was again brought with chronic diffuse osteitis of each tibia, which had determined not only great thickening of the bone, but also a lengthening. This latter was to be explained by chronic inflammation in the cartilages connecting the shaft of the tibia with the epiphysis. There was also ulceration of the skin over the shins. The child was kept in bed, and every night was rubbed with blue ointment after having a hot bath; under this treatment she was rapidly improving. Mr. Owen also called attention to the scars at the angles of the mouth, to the large, square forehead, and to the teeth; the left central incisor was notched, and the central incisors were sloping towards each other.

Habitual Constipation in Children and the Methods of Treatment.—Dr. DAY read a paper on this subject. Most cases, he said, are due to (1) a sluggish state of the muscular coat of the intestine; (2) to a diminution of secretion from the mucous membrane or the liver; and (3) to improper dietary. Children are variously affected by constipation: the bilious and plethoric require a daily evacuation, or the health suffers; whilst the neurotic, eating similar food, may have no evacuation for days together without inconvenience. Prolonged constipation is apt to lead to disease of the cæcum, chronic inflammation and thickening of the intestinal walls, dilatation of the tube, and occasionally perforation of the gut. Highly nutritious food, by not furnishing any residuum to be carried into the intestines, is conducive to constipation. In treatment, the author referred to the importance of bringing about regular action of the bowels by the child making a voluntary effort every morning, whether the desire be present or not. He next referred to the value of enemata when the colon was torpid and the rectum blocked, and of proper diet in the constipation of young children. Among drugs, strychnia and belladonna, by imparting tone to the bowels, relieving spasm, and lessening flatulence, were advocated. Nitric acid in some cases of chronic constipation was recommended. The author dwelt at some length on the great efficacy of an occasional mercurial purgative in constipation from deficient secretion of bile. Children bear an occasional dose of mercury remarkably well, but if repeated too frequently it causes lassitude, pallor of the face, softness of muscle, and irritability of temper. He spoke of its danger in the constipation of strumous and rickety children. Saline aperients were sometimes useful in children of full habit. Change of air and exercise were recommended as calculated to assist the viscera in the performance of their functions. Massage he considered a powerful remedy in chronic constipation, and if conducted by a competent person the process was pleasant and soothing to the child. Attention to diet was of primary importance.—The PRESIDENT called attention to the importance of making a digital examination in all cases of chronic constipation, and quoted a case where such an investigation led to the discovery of congenital deformity of the bowel.—Mr. CRIPPS LAWRENCE remarked on the treatment of typhlitis due to chronic constipation.—Dr. JELLY referred to the value of massage as a therapeutic agent.—Dr. ALDERSON remarked on the value of mercurial treatment in the case of bilious children.—Dr. WALTER PEARCE considered that constipation in some cases depended on the child avoiding stool, owing to the pain produced by soreness of the anus consequent on the irritation of thread worms.—Dr. SYDNEY PHILLIPS agreed that aperients should not be lightly used; tubercular peritonitis, obstruction from concretion, &c., had to be carefully considered. In many cases there was a deficient formation of bile; the stools were pale, hard, and scybalous in these children, and the administration of acids and calomel was called for. In many cases the small intestine was at fault and not the large, and it was necessary to decide if possible where the fault lay. The combination of aloes and belladonna was most valuable.—Dr. DAY briefly replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Coal Gas as a Cause of Sore-throat.

AT the meeting on April 15th, Dr. Alfred Hill, president, and subsequently Dr. Dudfield, vice-president, in the chair,

Professor CORFIELD read a paper on Outbreaks of Sore-throats caused by slight escapes of Coal Gas, of which the following is an abstract. He pointed out that in considering the deleterious effects of escapes of coal gas into dwelling rooms, attention has hitherto been almost entirely directed to cases of poisoning by asphyxia produced by such escapes—asphyxia which has been shown to be due to the carbonic oxide contained in the coal gas. He referred at some length to the interesting recent investigations of Professors W. T. Sedgwick and W. Ripley Nichols, of the Massachusetts Institute of Technology in connexion with the relative poisonous effects of coal and water gas, but these investigators only refer to effects produced by the carbonic oxide, and indeed conclude that "it is probably true that carbonic oxide is the only component of illuminating gas whose poisonous qualities are at present of practical importance to the public health." Michel Lévy, in his treatise on Hygiene, suggests that some of the effects produced on persons working in atmospheres charged with the products of combustion of coal gas may be due to unconsumed substances, such as the sulphite of carbon, but the author has been unable to find any account of definite illnesses produced by continuous slight escapes of coal gas from defective burners or joints in pipes. Dr.

Corfield then stated that during the past few years his attention has been gradually arrested by cases of illness, and more especially of relaxed, and even of ulcerated, sore-throats occurring in persons sleeping in rooms in which there were defective gas burners or pipes, but living in houses of which the sanitary condition was otherwise as perfect as the application of modern sanitary knowledge could make it. That the slight escapes of gas were the cause of the sore-throats was proved by the fact that the persons attacked became quite well on the defects in the gas burners or pipes being remedied, and that no other cases occurred. The following are some of the more remarkable cases which he described. In 1884 Dr. Corfield was summoned to a large country house, where the sanitary arrangements had been put into order under his own direction. On inspection, no escape whatever was found either from the drains or soil-pipes into the house. A slight escape of gas was noticed from a burner in the bedroom, in which the first case of sore-throat occurred, but this was not at the time thought to have anything to do with the matter, more especially as a nuisance had been created in the neighbourhood of that room by an earth-closet which the men-servants had brought in from outside and had used without properly supplying it with earth. However, after the removal of this nuisance, several more cases of severe ulcerated sore-throat occurred, some being those of visitors who successively slept in a particular room. On investigating the matter further, the author, who himself slept a night in that room, found a very evident escape of gas from one of the brackets there, the gas having, moreover, a very foul smell from being insufficiently purified. An examination was then made of the gas brackets all over the house, and other escapes were found. These were all remedied, and no cases of sore-throat have occurred since. At another house in London a similar outbreak of sore-throats took place on the return of the family after the summer outing. Slight escapes of coal gas were found in the rooms in which the persons who were attacked slept. These were remedied, and there have been no more cases of sore-throat. Several other similar cases were described by Dr. Corfield, who ended by saying that he himself had personally suffered in a similar manner from a slight escape of gas from a defective pipe in his own bedroom. He also pointed out that coal gas may get into houses through the basement, floor, and even up through the walls, especially behind panelling from defective mains in the streets. He had no doubt that the cause of the sore-throats was the breathing for weeks or months, especially at night, of air contaminated with a small proportion of coal gas, and he believed that the effective agents in producing the irritation in the throat were the bisulphide of carbon and other sulphur compounds in the gas.—In the discussion which followed, Dr. Sykes, Messrs. Wynter Blyth, Rogers Field, Butterfield, and Shirley Murphy took part.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on March 4th the following communications were made.

Intussusception of the Bowel; Abdominal Section; Recovery.—Mr. STREET read the case of a boy aged three years, admitted into Addenbrooke's Hospital, under Mr. Carver, on Jan. 20th, 1887. There had been pain, vomiting, and partial obstruction for four weeks, and complete obstruction for three weeks. The abdomen was opened on the day of admission, and the intussusception reduced. The patient was discharged cured, the bowels acting regularly, on March 5th.—Mr. ARNOLD INGLE (Shelford) mentioned the case of an infant five months old, who was attacked one day with pain in the body, and vomiting the next day. When seen by him on the third day there was no abdominal swelling or tumour to be felt, but two motions had been passed of bloody mucus. An aperient was given and the bowels acted, but the vomiting recurred; the abdomen became distended and the child died. At the necropsy a diverticulum was found in the ileum, and an intussusception of the bowel.

Cyst of Cerebellum, enclosed in Fourth Ventricle.—Mr. HEMMING (Kimbolton) described the case of H. N——, aged eighteen, who till twelve years of age was healthy and bright; then was attacked with unilateral convulsions, with aura up the left side; slight paresis of the left side generally followed each fit for a short period; the fits increased in frequency, the mind gradually weakened, and the body ceased to grow. He walked about for two years, then kept his bed for the last four years, gradually losing consciousness. He had not spoken for a year and nine months, and there was extreme rigidity of the left side for more than a year. The convulsions at last were bilateral, and the rigidity extended to the right side, neck, and back. Great emaciation took place, and he died of sheer exhaustion, the convulsions persisting to the last. At the necropsy the skull was thick, well ossified; head small, no gaping of sutures; dura mater not very adherent, not dry or sticky; some fluid between arachnoid and dura; brain rather shrunken; no apparent disease in motor area of cortex; arachnoid of Sylvian fissure glued up; cranial nerves looking healthy, except that the optic appeared small and very firm (his parents considered he had had no sight for some time); veins thickened; sinuses not gorged; corpus callosum firm and healthy; lateral ventricles containing fluid, but not much distended; third ventricle opened up by fluid, and anterior commissure tough; commissura mollis very tough, stretching half an inch without tearing. The fourth ventricle was distended into a globular form, lifting up the cerebellum, with thin and transparent walls posteriorly. Fluid clear, and floor of fourth ventricle perceptible through the fluid. Although fluid had drained from the lateral and third ventricles, the fourth ventricle remained distended. Cerebellum firm, not to say hard. On opening the fourth ventricle, a small cyst, containing clear yellow fluid, of the size and shape of a hazel-nut, presented itself on the right side of the under surface of the cerebellum. It was partially embedded in the substance of the right lobe of the cerebellum, causing a sharply-defined concave indentation and some extra hardening and thinning of the lobe around it. Mr. Hemming, on examining the pons and medulla, did not at first recognise any evidence of pressure, but these parts were removed and sent to Dr. Sharkey, who instantly noticed the small size of the right pyramid in the medulla before decussation, a drawing of which was shown. No doubt the pressure of the cerebellum in the living state upon the back of the pons and medulla was the cause of the gradual and prostrated illness, of convulsions, paralysis, and rigidity, and this case would support Dr. Sharkey's view.

Cases of Cerebellar Tumour.—Mr. MARTEN brought forward the case of M. S——, aged fifty-two, admitted into the hospital, under Dr. Bradbury, on Dec. 1st, 1886, and died on Jan. 8th, 1887. The symptoms had been severe occipital headache, vomiting, double optic neuritis, and a tendency to fall backwards in the middle line. No rigidity. The post-mortem examination, made by Mr. Griffiths, showed a cyst in the cerebellum pressing on the fourth ventricle, and excess of fluid in the ventricles.—Mr. LAURENCE HUMPHRY read the case of Ellen W——, aged twenty-one, single, admitted into the hospital, under his care, on July 14th, and died on October 25th, 1886. The previous history showed twelve months' frontal and parietal headache, dizziness, and vomiting. The eyesight became defective in March, and complete blindness in June. No fits or rigidity. On admission she was just able to walk. Pupils dilated, no reaction to light, no squint; constant purposeless vomiting; pulse regular, 64; temperature normal; speech laboured and thick. There was slight paresis of the muscles on the right side of the mouth and right supra-orbital region. The grasp of the right hand was a little weaker than the left. Reflexes were normal. There was no tenderness to percussion over head. Flushing of face was constantly noticed, and there was intense double optic neuritis. The urine contained no albumen or sugar. The patient left the hospital, but was kept under observation, and gradually sank from exhaustion. At the necropsy a tumour (a round-celled sarcoma) was found on the upper aspect of the cerebellum, of the size of a tangerine orange, and there was much basic meningitis and gelatinous thickening of the membranes at the base, involving the optic commissure and nerves.

Sarcoma of Testis in a Child.—Mr. STREET showed this tumour, which had been removed by Mr. Wallis from a child four years old. The swelling was first observed nine months ago, and at the time of operation was as large as a duck's egg. It extended up to the internal abdominal ring. The child recovered. Microscopic examination showed a spindle-celled sarcoma, with a large amount of fibrous tissue.

MIDLAND MEDICAL SOCIETY.

A MEETING was held on March 16th, Mr. Lloyd Owen, F.R.C.S.I., President, in the chair.

Chronic Phlegmasia Dolens, leading to Elephantiasis.—Dr. SUCKLING showed a man, aged thirty-eight, who had suffered from enlargement of the left leg for nearly four years. The swelling commenced in the foot, and shortly after an abscess formed in the groin, which discharged externally, leaving a depressed scar. The leg has remained enlarged since then, and is now much larger than its fellow; the skin is rough and thickened, and can scarcely be pinched up. There is well-marked pitting upon pressure in the foot and leg. The circumference of the left thigh is three inches greater than that of the right, and the left leg is similarly enlarged. The patella and tibia on the left side are apparently much enlarged. A depressed scar is present in the groin, and enlarged glands can be felt there. The patient cannot walk about for more than a month at a time, the leg then becoming very painful and the swelling increasing. At this time he has to go to bed for a week or so, when the pain ceases and the swelling somewhat subsides.

Gastric Ulcer.—Mr. WHITTINDALE showed the stomach from a female aged twenty-two, who had died in the Queen's Hospital. For the last four months she had had pain in the epigastrium and vomiting after taking food, but no hæmatemesis. Two hours before admission there had been profuse hæmatemesis. This stopped for a time, but was soon followed by another attack, which proved fatal. On a post-mortem examination all the organs were found to be exceedingly anæmic. The stomach contained a pint of dark grumous material and blood. On the posterior aspect, near the lesser curvature and at the pyloric end, there was a chronic ulcer the size of a sixpence, the edges of which were much indurated. A large vessel had been opened by the ulceration, but the serous coat was not perforated.

Renal Calculus.—Mr. MORRISON showed a uric acid calculus that had been removed from a man who had been treated for spinal disease for many years. On admission to the General Hospital he had several sinuses in the left lumbar region, which led down to a roughened body, supposed to be a sequestrum. This, on removal, was found to be a calculus. The patient made a perfect recovery.

Pyo-salpinx.—Dr. MALINS showed a large pyo-salpinx that he had successfully removed from a patient aged twenty-eight.

Rhinolith.—Mr. AUGUSTUS CLAY showed a large rhinolith.

Mr. SIDNEY BARWISE read notes of a case of Mollities Ossium.

Dr. CARTER read two short papers: one, "Observations on the Salicyl Treatment of Acute Rheumatism"; the other, "A Note on the action of the Colchicum Preparations in Gout."

At the meeting on March 30th the following specimens were exhibited:—

Syphilitic Stenosis of Trachea.—Dr. SUCKLING showed a woman aged fifty with signs of tracheal stenosis, which he considered was most likely due to syphilis. She contracted syphilis twenty years ago, and five years later she suffered from ulceration of the hard palate, which resulted in perforation. For the last nine years she has suffered from difficulty in breathing, which is noisy and stridulous. The stridor is constant, accompanying both inspiration and expiration, but is aggravated by emotion and by exposure to cold. On several occasions the dyspnœa has been extreme, and almost necessitated tracheotomy. The breath sounds over the larynx and trachea are high pitched and sibilant. The hard palate is perforated in the middle line and on the left side. There is no laryngeal stenosis or other disorder, the cords moving freely. On inspiration the glottis is rhomboidal in shape, being extremely dilated. Nothing abnormal could be seen in the trachea. There were no signs of mediastinal tumour, no dysphagia, or other pressure symptoms.

Aneurysm of Aorta.—Dr. SUCKLING also showed a case of aneurysm of the transverse and descending aorta in a man aged sixty-three.

Epithelioma of Male Breast.—Mr. BARLING showed a patient aged forty-seven, who nearly five years ago noticed a burning and smarting pain at the left nipple, and on handling the part found a hard swelling; this slowly increased, and eighteen months ago the skin over it broke. Since that time the ulcer has slowly increased, until now it is a circle of three inches in diameter, shelving gradually from the edge to the centre, which is the deepest part. For the most part the ulcerated surface is nearly smooth, but presents in places a few coarse granulations. The edge is thickened, very hard, and markedly everted, and the base of the ulcer so fixed that it cannot be moved over the bony wall of the thorax. There is a chain of enlarged glands running to the top of the axilla under the anterior boundary, and some hard enlarged glands are also to be felt above the clavicle. The patient's general condition is good, and, as a rule, he has but little pain. A scraping from the ulcer shows that it is a squamous-celled carcinoma.

Multiple Exostoses.—Dr. W. RICHARDS exhibited a case of multiple exostoses.

Excision of Goitre.—Mr. CHAVASSE showed a woman aged twenty-nine, from whom he had successfully removed the right lobe of the thyroid, and read a paper on the subject.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Treatment of Lupus.—Removal of Uterine Appendages.—Athetosis.

A MEETING of this Society was held on Jan. 21st, Mr. Hatherly, President, in the chair.

Mr. CHICKEN read a paper on the Treatment of Lupus and its Allied Disorders. He took epithelioma as a type of the diseases allied to lupus as exhibiting a cutaneous or mucous cell development, infiltrating or penetrating subjacent tissues, and depending on a specific morbid impulse. In the case of an affection of the skin, or those parts which could be safely operated upon, he advocated the treatment of the part by thoroughly scraping away, as far as possible, the new growths, and then the free rubbing in of iodoform. In those instances where the situation was such that this could not be done—as, for example, in epithelioma of the cervix uteri—he employed the frequent application of iodoform. Although, in these difficult cases, it was not possible to eradicate the disease, it modified the subsequent progress and unpleasantness of the malady in a marked degree. In epithelial stricture of the rectum, he first washed out the bowel with warm water, and then injected into the stricture from two to four drachms of iodoform daily by means of a special insufflator. In exposed situations, where the treatment could be thoroughly carried out, the result was very satisfactory. He showed two cases, one of lupus and one of epithelioma, both of which had been operated upon in the manner described, some years ago. There had been no recurrence. Mr. Chicken drew the following conclusions:—1. That lupus and epitheliomata are types of a cellular infiltrating new growth, and are best treated by scraping with a blunt knife, and when the surface has been as far as possible cleared from the invading cells, by rubbing in a remedy, of which iodoform is a good example, with the object of penetrating to those outlying detachments which the knife has not reached. 2. That when the growth is situated in a part that can be readily attacked the treatment gives ground for a good hope of recovery, at any rate better than excision. 3. That when the situation is such that scraping cannot easily be done, the copious insufflation of large quantities of iodoform is practically without risk and of great benefit to the condition of the patient. 4. Iodoform is specially applicable, because it seems to exert a specially sterilising influence on the growth, and is capable (by virtue of its volatile and peculiar penetrating properties) of permeating tissue more than an insoluble non-volatile substance. It is quite harmless and unirritating to healthy structures.

Dr. MUTCH showed the Ovarian and Fallopian Tubes removed by Dr. Elder from a patient aged twenty-seven, married. The left tube, about the size of a kidney, was full of pus, the ovary being converted into a multilocular suppurating cyst. The right tube was enlarged and inflamed. The patient made a good recovery.

Dr. ELDER showed the following specimens:—1. Sac of an Ovarian Cystoma, of which the pedicle had become

twisted, producing suppuration of its contents and acute peritonitis. 2. The ovaries and Fallopian tubes from a patient operated upon on Jan. 13th. The patient has been more or less of an invalid since marriage; lately quite so. The uterus was retroverted, and the ovaries, enlarged and exquisitely tender, lay under it in Douglas's pouch. Rest and the usual treatment had failed to give even partial relief. At the operation both uterine appendages were removed, the ovaries being enlarged and the seat of cystic degeneration. She is making an excellent recovery. 3. Uterine appendages removed by his colleague, Dr. Truman, for persistent pain, dating from one month after the patient's marriage three years ago.

Mr. T. D. PRYCE showed a case of Athetosis in a youth aged seventeen. There was a history of convulsions when eleven months old, followed by loss of power and motion of the right side. Mr. Pryce considered the condition to be due to a cerebral lesion coincident with the early convulsions, and also to a subsequent degenerative change of the lateral columns, and to a slight extent of the anterior grey matter of the spinal cord.

At a meeting held on April 1st,

The PRESIDENT (Mr. Hatherley) showed for Mr. Thompson a specimen of Enchondroma of Finger.

Drs. HANDFORD and HUNTER showed a case of Congenital Absence of Left Leg, Left Pelvis, and Left Kidney. The diaphragm and lower part of rectum were also absent.

Dr. ELDER read notes on two cases of Hydramnios.

Mr. PRYCE read a paper on Perforating Ulcer of the Foot, and illustrated it by pathological and microscopic specimens and diagrams.

Reviews and Notices of Books.

On Fevers: their History, Etiology, Diagnosis, Prognosis, and Treatment. By ALEXANDER COLLIE, M.D. London: H. K. Lewis. 1887.

THIS volume, which forms one of the "practical series" of medical and surgical manuals in course of publication by Mr. Lewis, deserves attention from the fact of its author having been so long devoted to the subjects of which it treats. He is therefore in a position to speak with authority, as well as with complete freedom and independence. Illustrations of these characteristics are not far to seek. They are perhaps most particularly to be found in the chapters dealing with enteric fever and small-pox. On the etiology of the former disease Dr. Collie has no hesitation in adopting views which at the present day are held by comparatively few. They are the views of Budd rather than those of Murchison, and are supported by the author with some striking evidence of the propagation of the disease amongst the nurses at Homerton Free Hospital. Dr. Collie has been persuaded by this experience to the belief that enteric fever is propagated by direct infection; and he explains the apparent facts of incommunicability on the grounds of immunity and the early period of life at which it prevails. Upon this we need only remark that the *onus probandi* rests upon those who adopt Dr. Collie's argument, since the possibility of contagion through fæcal contamination must be quite excluded before such a conclusion can be reached. Amongst other statements which are undoubtedly novel we note those with regard to relapse in enteric fever: "Relapse occurs in a small proportion of cases..... It is rarely fatal. Second and third relapses have been mentioned, but they are very rare" (p. 78). "*Relapses:* These are almost invariably mild and the prognosis favourable" (p. 84). The rarity of relapse here implied does not accord with our experience; and the posthumous work of the late Pearson Irvine clearly proved how many cases of prolonged typhoid must be regarded as examples of relapse. Dr. Collie has never met with enteric fever in the subject of phthisis—a suggestive and striking fact, which, like many other statements, is of much value in the natural history of the disease. Within a small compass he has succeeded in giving a clear outline of the main facts, but has not discussed the question of etiology which has come so much into prominence of late—we mean that of the typhoid bacillus. The article on small-pox, again, bears evidence of the author's personal observation, and is illustrated by tables showing the influence of vaccination upon mortality. The strongest parts of the work are those which deal with diagnosis and treatment, for here Dr. Collie is thoroughly at home and succeeds in imparting to the work its "practical" character, for which it will be highly valued. Nevertheless, we are not wholly satisfied with it. The author has not, it seems to us, given himself scope enough to adequately discuss his subjects. He relies too often, in the descriptive passages, upon excerpts from other writers, whereas we well know how capable he is himself of clinical description. The book is well printed, and contains some coloured plates illustrative of typhoid and variolous lesions.

Sputum; its Microscopy, and Diagnostic and Prognostic Signification. By FRANCIS TROUP, M.D. Edinburgh: Oliver and Boyd. 1886.

THE thoroughness with which it is possible to investigate clinically cases of pulmonary disease is one of the most encouraging facts in scientific medicine. The microscope comes to the aid of the stethoscope, and the information gathered by the one serves to justify or modify that derived from the use of the other of these essential instruments. Dr. Troup deserves well for having presented in so lucid and striking a manner the results of his own researches into the microscopical characters of the sputum. Availing himself of photo-micrography, he has so amply illustrated his work that a study of the plates alone will be of the greatest possible service. We have seldom seen such excellent photogravures and chromolithographs; and their fidelity to the objects represented is, at least in the case of the former, of course unimpeachable. The text is also to be commended, for it is evident that the writer speaks from the fulness of his own personal knowledge. It is, for instance, an instructive point to bear in mind that he has found the detection of elastic tissue in the sputum to have a greater diagnostic meaning in tubercular phthisis than the presence of the bacillus; for 90 per cent. of the cases in which elastic tissue is found are cases of tubercular phthisis, from which it is not difficult to distinguish other destructive lung diseases that yield the remainder. Dr. Troup also lays great stress upon the relative abundance of the pulmonary elastic tissue as indicative of active destruction. There is an interesting chapter upon Curschmann's spirals, which are to be found in cases of bronchial irritation, and are probably formed primarily in the minute bronchioles. The bacillus of tubercle is treated with all necessary detail; and its persistence in putrefied sputum leads to a remark condemnatory of the bacterium termo treatment. Dr. Troup also notifies the occurrence, not only in phthisical sputum, but in all cases where there is more or less bronchial inflammation, of diplococci of various sizes and arrangements, sometimes in large numbers. He considers that the tubercle bacillus is of more value in diagnosis than in prognosis. A chapter on pneumonic sputa follows, and the opinion held that various forms of pneumonia are probably associated with other micro-organisms besides the pneumococcus. In the next chapter the characters of the sputum in bronchitis, bronchiectasis, and whooping-cough are considered. Micrococci are described in the latter, but are not believed to be pathognomonic. Other chapters deal with pigmented sputa, bloody sputa, and the sputa in disease of the larynx and its neighbourhood. The volume is one which, apart from its practical value, has been produced in a manner highly creditable to both author and publishers. We heartily commend it to the notice of practitioners.

The Man of Science, the Man of God—Sir James Y. Simpson. By the Rev. CHAS. BULLOCK, B.D. London: *Home Words* Publishing Office, Paternoster-square.

THE scientific reputation of Sir James Simpson is world-wide. The double presentation of his mind and character which is set before us in this modest volume and in the larger "Life" is perhaps less widely familiar. In these pages, while personal faults are not denied, the rise and growth of qualities which proved in their application so useful to mankind are clearly brought out. Professor Simpson, it may be noticed, was not, like some great men, a human phenomenon from his earliest youth. As a boy he evinced, nevertheless, the elements of mental and moral faculties which needed but the stimulation of circumstances, not always favourable, to develop a strong and helpful as well as a keenly perceptive character. He was quick, industrious, tenacious of memory, and generally liked because of his kindness of disposition. As a student he was of the working order, and achieved considerable distinction in a time when the Edinburgh school did not abound in scholastic honours. When, after graduation, he became a practitioner, the same laboriousness was one of his most striking characteristics. Energetic and resolute, sleeping often far too little, persevering in spite of occasional ill-health, he did full justice to scientific sympathies which were wide and yet particular. He was no mere specialist, though leaning from the first towards one department of medicine. Matters of the most general, even comparatively trivial, interest engaged his attention for the time being almost as if they formed the chief business of his life. Investigations in anæsthesia very early entered into his varied curriculum of self-education, and when at last, in 1847, he saw the dawn of his own great discovery in the successful use of ether for this purpose, he "could think of naught else." As a man Professor Simpson did not belie the promise of boyhood, but, notwithstanding the faults of an impulsive nature, exaggerated by the bustle and battle of life, gave in his day many proofs of a genial and considerate disposition to friends and patients of every station. Neglect of professional engagements has been attributed to him by some, but this was commonly the natural consequence of overwork. Till he had reached the prime of manhood Professor Simpson's most active life was almost entirely an intellectual one. Religion did not show itself much upon the surface. Certain forms he acknowledged; he chose his church, but it is not till within some twelve or thirteen years of his death that we find any important profession of his personal views upon the subject. It does not appear, however, that his ultimate adhesion to the simplest principles of evangelical belief was quite a sudden matter; it was rather the culmination of previous deliberations, and was characteristically outspoken. The reading public will find much to interest in this little work. One or two errata might be excluded from later editions, such as "Wallis" for "Walter" on p. 48, and "Turner," we suppose for "Thomas" Keith on p. 55.

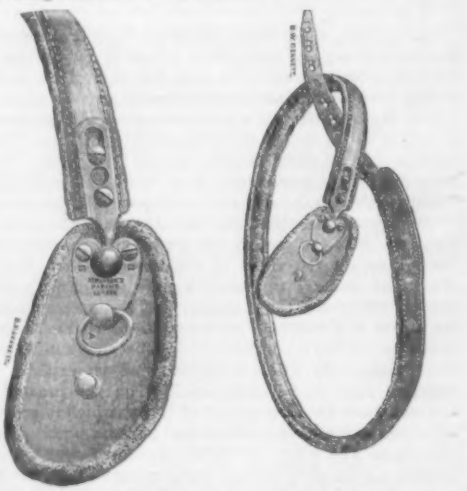
On Medical Climatology: a Scheme for defining Local Climates by combined Meteorological and Phenological Observation. By CHARLES ROBERTS, F.R.C.S., &c.

THIS is a short paper read by Dr. Roberts at the congress of the Sanitary Institute held at York last September. The title explains the proposed method of the author. Linnæus long ago collected information with the view of showing the influence of locality upon the leafing, blossoming, fruiting, and fall of the leaf in plant life. We are accustomed to estimate the climate of any given locality by purely meteorological considerations. Mr. Roberts holds, and we think with good reason, that a combination of these two methods might lead to results of great practical utility. He points out that "plants are most exposed to, and most distinctly declare, the geological and climatic conditions of a country or district. Being fixed to the soil, they show its character; and being confined to one place, they sum up the whole range of meteorological phenomena to which they are, and have been, exposed." The researches of Bowditch in America and of Buchanan in this country have shown how important a factor the character of the soil is with regard to the etiology of one important disease—viz., phthisis. Mr. Roberts proceeds to tabulate the dates of the various epochs of plant development in different localities, and then works out the temperature and moisture equivalents for these periods. On page 5 he gives an interesting diagram, showing at a glance the relative viability of a few common trees, shrubs, and flowers in London and its neighbourhood. Mr. Roberts' methods of observation are full of interest to the botanist, and have promise of real utility for the medical climatologist and the practical physician.

New Inventions.

ATKINSON'S "PERFECT" TRUSS.

MR. B. J. ATKINSON, formerly of 3, Hemming's-row, Charing-cross, but now of 7, Mill-street, Hanover-square, W., has recently patented an important improvement in trusses. This consists in uniting the pad to the spring of the truss by a universal joint, thereby allowing it, when necessary for adjustment, to be moved in any direction. When the wished-for position has been attained, a lever, acted upon by a binding screw, compresses the ball of the joint and completely fixes the pad. The accompanying woodcuts will afford a good idea of its construction. When an alteration



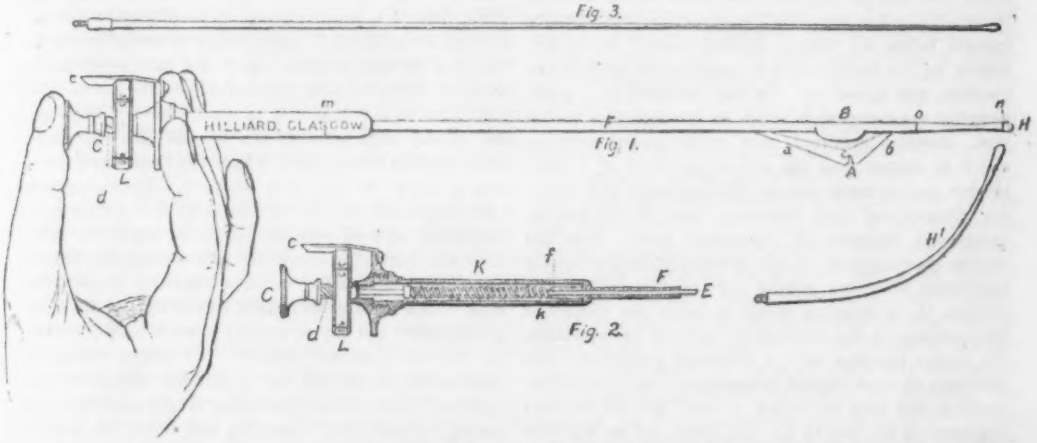
in the position of the pad is required, the binding screw is released, the pad adjusted, and the screw again tightened. A special feature, also, of this truss is that it is made to press over the internal ring, and slightly in advance, without pressing upon the spermatic cord; and further, from the peculiar formation of the pad (a perpendicular section of which will show a parabolic curve) pressure may be made by a comparatively flat surface or a more or less obtuse one, at the discretion of the surgeon. The whole design has been very carefully considered, and can best be understood by an examination of its parts. The form of truss varies, of course, in the case of femoral hernia, though the above remarks apply as well to this condition. The practical surgeon will see the great advantages presented by this kind of truss.

A MODIFIED FORM OF URETHROTOME.

A LARGE majority of surgeons are agreed that internal division is the best treatment of many strictures of the urethra. Of the innumerable instruments for the performance of this operation which I have seen or have been able to find described, all of them, while possessing many good and ingenious qualities, have had also some one or more faulty features. My aim has been to combine in one instrument all the good and eliminate all the bad points. I do not claim for my instrument many original features, only that it possesses the merits and avoids the faults of its predecessors.

There seem to me to be required in a perfect urethrotome at least seven qualities—viz.: (1) to be used with one hand; (2) to cut either from before back or from behind forward; (3) to incise any part of the circumference of the urethra; (4) to be easily regulated, so as to cut to any depth, even when the blades are out of sight in the urethra; (5) to be of the smallest calibre possible when the blades are sheathed; (6) to be adapted to carry a guide bougie; and (7) to be easily cleaned. The value of the first of these may not be apparent; but with one hand you have a much more delicate sense of touch, which is all you have to rely upon in this operation. Who would hold a probe or a catheter with both hands? It is also advantageous to be able to grasp and steady the urethra with the free hand. To attain this the projection of the knives must be produced by flexion of the fingers, because this is more powerful than extension, and much more completely under our control—I presume in consequence of our habituation to use all instruments by the aid of the flexor muscles.

That this instrument possesses the other qualities of a perfect urethrotome as given above will be seen from the following description. It consists essentially of a jointed knife (A, fig. 1), which can be projected from a sheath (B) to regulated distances. This is effected by pressure on the button (C, figs. 1 and 2), which is continuous with the steel rod (E, fig. 2) tightly fitting the tube (F), the end of this rod being the knife (*a*), and the rod being reduced and tempered for a short distance from the knife. The other blade (*b*) also runs into a fine-tempered end-piece, which rests against the solid probe point, either straight (H) or curved (H″), which screws on at *o*. The blades are withdrawn on removal of the pressure by the spring (K, Fig. 2). The extent of projection of the knives is regulated by the graduated wheel (L), turning



on the screw (*d*), and held in place after setting to the required number (French gauge) by the spring wedge (*c*). The whole tube (F) carrying the knives is only slotted for a short distance, and the steel rod is squared and fitted to a square box at the point *f*, Fig. 2. To clean the instrument screw off H. Turn the milled head (C) until the two parts of the rod which are united by a screw at *k*, Fig. 2, are separated. The anterior part of the rod with the blades can then be drawn out at the end (*o*). The spring box unscrews at *m*, Fig. 1. Fig. 3 is the conducting bougie, which can be screwed on at *n*, Fig. 1, in place of the probe point. The tube carrying the knife-rod is only slotted for two inches and a quarter, and is thus rigid. The square socket at *f*, Fig. 2, prevents twisting of the knives.

The instrument has been most satisfactorily made for me by Messrs. Hilliard and Son, Renfield-street.

WM. JAS. FLEMING, M.D.,
Surgeon to the Glasgow Royal Infirmary.

NINTH INTERNATIONAL MEDICAL CONGRESS.

IN the section on Medical Climatology and Demography of the Congress to be held at Washington in September next, the following scheme of subjects for papers and discusions has been prepared:—

1. Importance of the study of climatology and demography in connexion with the science of medicine. 2. What constitute determinate climatic characteristics. 3. The effects of climate on the human race as manifested in local demographic conditions; and of the several elements of climate as shown by coincident meteorological, morbility, and mortality statistics. 4. The question of acclimation. 5. Relative advantages of mountain and seaside resorts for recuperative purposes and as palliative or curative in certain diseased states of the system—segregation *versus* aggregation of invalids at health stations. 6. The therapeutic value of natural mineral waters. 7. Accurate records of prevailing sickness in any community a necessary factor in any comprehensive system of vital statistics. The responsibility of Governments to amply supply their people with the climatic and vital statistics of their respective countries. 8. Collective investigation, apart from aiding the study of the natural history of disease, as contributive of numerical data having a demographic bearing—(1) as to the kinds and proportions of prevailing diseases; (2) as to the absolute amount of daily sickness and consequent loss of time, occupation, &c. 9. Medical nomenclature considered in its practical relations to vital statistics. 10. The meliioration of demographic conditions effected by preventive medicine. Influence of the physical well-being of a population upon its economy. Offences against moral and civil law in their medical relations to demographic circumstances.

Albert L. Gihon, M.D., P. O. Box 291, Vallejo, California, is president of this section; and Charles Denison, M.D., of Denver, Colorado; Isambard Owen, M.D., of Hertford-street, Mayfair, London; Dr. E. Bertherand, of Algeria; and Dr. A. Wernich, of Cöslin, Germany, are the secretaries.

THE LANCET.

LONDON: SATURDAY, APRIL 23, 1887.

THE deficiencies in the knowledge of the routine work of professional practice shown by our young practitioners fresh from the schools and from examinations, which have been so frequently referred to in our columns by ourselves and by numerous correspondents, were officially brought before the General Medical Council at its last session by Dr. GLOVER, and a committee to consider the question was agreed to. He has reprinted as a small pamphlet the statement in which he introduced his resolution. Hospital practice is very unlike general practice, and it is evident that the success and value of a practitioner depends much more on his familiarity with everyday diseases and their treatment than on his making exceptional diagnoses of phenomenal cases. How this routine knowledge can be best obtained without materially interfering with the general plan of his medical curriculum is the question which is before the committee for consideration, and everyone will agree on its importance. "A *limited* pupilage with a registered practitioner, and insistence on more clinical, therapeutical, and pathological teaching and work at medical schools," are the remedies suggested by Dr. GLOVER for this defect, and we hope that the committee will be able to make some useful recommendations for the guidance of parents and teachers. The difficulties, however, in framing any useful report are greater than appears at first sight. In England, owing mainly to the non-enforcement at the present time of an apprenticeship, which was formerly required by the Apothecaries' Society, medical education more and more tends to a commencement at a medical school or recognised hospital, and in Scotland this practice is almost universal, for in the quinquennium 1871-75 only seven students out of 1717 began their study elsewhere than at the Universities. Any enforced pupilage would therefore entirely change Scotch medical education, and are there sufficient grounds for doing this? Is the Scotch graduate so far inferior to his compeers in England and Ireland in the practical details of his work that his methods of early study must be radically changed? The average interval between the registered date of studentship and the date of a first qualification has been shown to be nearly five years, although forty-five months only is the period insisted on by the Conjoint Examining Board in England; and no regulation can be adopted which will in any way lengthen this period of study without materially affecting the number of those who are desirous of entering the medical profession. Pecuniary reasons alone will be sufficient to deter many, otherwise well qualified, from studying for the profession if an increased length of probationary study be required. Moreover, another factor besides the student must be dealt with. The committee will have to judge whether every general practitioner is fitted for the duties involved in taking pupils. Pupilage with a scientific practitioner is the greatest possible boon; pupilage in other cases may degenerate into something but little removed from drudgery, and very few parents outside our profession can be expected to discriminate between the two extremes. Besides details of medical practice, a pupil may reasonably expect to be taught chemistry and physics, a little botany, and the rudiments of materia medica in his first year; and this should be secured, either by the practitioner being really able as well as willing to undertake these obligations, or by his seeing that an efficient teacher can be found within ready distance. Dispensing medicines and visiting ordinary cases are very important, but they should not occupy the whole time of a pupil between his leaving school and his entering at a hospital, if the pupilage is to extend over more than two or three months. Again, the more select in the status of the patients the practice may be, the less can the pupil learn, so that it is only in mining, factory, Poor-law, and similar large practices that he can gain the essentially practical knowledge of infantile and common diseases that is urged on him as a necessity. Dispensing and book-keeping are not now so formidable as in former days. Dispensing has been quite changed within late years. Mixtures, concentrated infusions, and pills are now largely used according to set formulæ, and have materially lightened the work which made great inroads on the time of the older practitioners; and anyone quickly learns to keep his books on his own plan and system. The proper writing of prescriptions is another and a different matter, but we question if this can be judiciously taught until late in a student's career, and it may be and should be made a prominent feature in the instruction obtained from out-patient class-rooms. We would like to ask the committee to seriously weigh these arguments for and against an early pupilage even for a limited time, and to take the opinions of practitioners in the provinces and in the metropolis, and also of some of our younger teachers brought up under the new *régime*, as to whether six months devoted to general practice spent between the second and the final examinations would not be a better alternative. There are, however, objections to this course also, for it would interfere with the regulations for resident appointments in many medical schools, which are so valuable to the student from every point of view; and if required to assist in working a general practice at this period of his curriculum a student would probably ask to be paid for his services, instead of having to pay a premium as under the old apprenticeship system. To Dr. GLOVER'S other suggestions for utilising country hospitals and workhouse infirmaries as centres of medical education no objection whatever can be taken, and the difficulties surrounding their practical application could be easily removed. We hope that the committee will draw up a reasonable and workable scheme, so that the great advantages held out by the proposition may be realised to the medical student.

IN an article last week we commented on certain Bills which have this session been introduced into Parliament, and which have as their object the improvement of house drainage, but which take no heed of the many conditions connected with the dwelling which are also concerned in prejudicing the health of the inmates. Professor CORFIELD has now brought before the profession other circumstances

which affect health, and has shown much reason for thinking that so simple a matter as faulty gas fittings may be responsible for some of the ill health which has hitherto been attributed to defects in house drainage.

Some three years ago Professors W. T. SEDGWICK and W. RIPLEY NICHOLS contributed a paper on this subject to the Massachusetts State Board, in which they discussed the relative poisonous effects of coal and water gas. They contended that such harm as resulted from the inhalation of small quantities of these gases was due to carbonic oxide, and they proceeded to show that water gas, inasmuch as it contains more carbonic oxide than coal gas, would necessarily be more injurious in its effects. Some account of the symptoms is given both where the quantity breathed was large and where it was small; the latter producing intolerable headaches in a lady previously in fair health, but who happened later to occupy a bedroom in which was an escape of water gas from a leaky pipe below the floor.

Professor CORFIELD has now related to the Society of Medical Officers of Health a series of cases observed by himself in which health appears to have been injuriously affected by small escapes of coal gas into sleeping-rooms through defective gas fittings. The symptoms he described are not identical with those mentioned by American writers, the more prominent in the English cases being relaxed and ulcerated sore-throat. This difference, however, may not have any importance as affecting the evidence that the illness was dependent upon the condition to which the writer attributes it. It is probable that loss of health might show itself in one person by headache and in another by soreness of throat, and the number of cases which have yet been observed is not sufficiently great to warrant any generalisation on this point.

Apart from the interest which attaches to observations by so trustworthy an authority, a further lesson is to be learnt. There has for some years been a growing tendency on the part of many to accept as an assured fact that throat illness is necessarily evidence of defective drainage. Dr. CORFIELD'S cases are of value in showing that this assumption is not safe, and if later we are led to conclude with him that coal gas may produce results not dissimilar from those usually attributed to the air contents of drains, the more necessary is it that we should be prepared to find still other causes which may affect the inmates of a house. The difficulties which surround all questions of this sort are no doubt very great, and it is not easy to see how such exact evidence as we desire is to be obtained. It is enough at the present moment to allow that Dr. CORFIELD has indicated the necessity for more extended observations, and for more reserve in the acceptance of a too general belief that the occurrence of throat illness must be due to faulty drains. While, therefore, we fully recognise the importance of a perfect drainage system, we would desire to repeat our recent warning that householders must not assume that an expenditure of money in improvements of this character will ensure them against further ailment. There is, indeed, much need for more investigation into local causes which may affect health, and those skilled in etiological inquiry will render greater service by seeking in the first instance the cause of disease, than by effecting the improvement of only one of many possibly unhealthy conditions.

IF the affiliation of Hospitals and Dispensaries is to pass from the academic region into that of practical medico-social politics, the beginning of the passage may be expected on Tuesday next, when a vote will be taken in the Medical Attendance Organisation Committee on the following motion, proposed by Mr. BOUSFIELD and seconded by Mr. TIMOTHY HOLMES:—

"That the true functions of the out-patient departments should be mainly consultative, and that their committee and medical staffs be requested to confine their patients, as far as possible, to those who have been previously treated at provident dispensaries or by ordinary medical practitioners."

Already a lively discussion on this motion has taken place, in which Dr. ORD, Mr. TIMOTHY HOLMES, Dr. J. C. STEELE, Dr. GILBART SMITH, Mr. NELSON HARDY, and others took part. All those who hold strong opinions, or who feel the importance of the question as affecting either medical education or public opinion concerning hospitals, might rely confidently on a short hearing on Tuesday from the committee, which meets at 5, Lamb's-conduit-street. Dr. GILBART SMITH on Tuesday last described the views of Mr. NELSON HARDY on the abuses of the out-patient department as "poetry." This is a euphemistic expression which breaks no bones. It represents the views of the ardent physicians and surgeons of the out-patient departments who feel that interesting cases must be found, and that crowds must be forthcoming to supply them. They regard such visions as those of Mr. HOLMES and Mr. NELSON HARDY as "utopian" in the present state of society, when the strata of poverty in such a community as that of London are so deep and dense. Students, too, must be attracted and employed, and for this end numbers are an advantage. Numbers have a charm, too, for hospital treasurers and secretaries, when the reports are made up. They seem to swell the sound of the good done and the charity dispensed. Moreover, as Dr. STEELE puts it, the hospitals are reluctant to institute a sort of relieving officer, and are disposed to regard inquiry into the means and character of every applicant as an inquisitorial and ungenerous process. It would be folly to underrate the force of some of these considerations, or of all of them combined. But there are some others to be set off against them. The out-patient department of the hospitals is their weakest and most vulnerable spot. It has led to more adverse criticism of hospitals than any other part of their administration. The public would be deprived of half its excuses for not supporting hospitals more generously if the grievances of the out-patient department were removed. Nay, more, the hospitals would have the credit of being the most powerful promoters of thrift and providence. It is not proposed absolutely to close the out-patient department, but to restrict it to a more serious class of cases, recommended by dispensaries or practitioners. With such limitations cases would be carefully examined and prescribed for, without overtaxing the hospital staff. If the commoner cases were in this way kept in the dispensaries, they would not necessarily be lost to the use of students and for educational

purposes—for it is part of the scheme of affiliation, or might be made so, that the dispensaries should be brought into the service of medical education. Then, as a still more convincing argument, some hospitals have actually carried out this reform. At Guy's, at St. Thomas's, and at St. George's there is a restriction of the number of cases of out-patients, and it is found to work well. Under all these circumstances we bespeak for the resolution quoted above a fair hearing. No doubt its promoters would agree to any modification likely to make it more workable. The objection to all such motions is their lack of feasibility. What is wanted is a resolution to satisfy, not the social and medical philosophers in Lamb's-conduit-street, but the medical profession, medical teachers, and the public.

AT the recent meeting of the Council of the Royal College of Surgeons, as we announced last week, "the seventh report of the Committee on Charters and Bye-laws, containing the draft of the new supplementary Charter to give effect to several alterations in the Charters agreed to by the Council, was approved and adopted, and it was resolved that the necessary proceedings be taken to submit the same to the Privy Council." It will not be amiss, therefore, to remind our readers of the principal alterations which the Council proposes to ask for in the constitution of the College. They may be briefly summarised as follows. Firstly, to permit voting by means of voting papers as an alternative to voting in person, as at present; secondly, with respect to the eligibility of Fellows for election to the Council, to reduce the term of qualification from fourteen to ten years; thirdly, to abolish the restriction as regards Fellows who are candidates for the Council which prohibits their practising as Apothecaries, and requires them to be in the *bonâ fide* practice of Surgery; fourthly, to abolish the Midwifery certificate of qualification; fifthly, to enlarge the powers of the Council as to the election of Members of the College of twenty years' standing to the Fellowship—i.e., to give the power to elect Members of that standing to a number not exceeding ten instead of only two such Members, as at present; and lastly, to give the power to elect two Honorary Fellows in each year, whether Members of the College or not, such Honorary Fellows to have no vote for the election of members of the Council. It is worthy of note that none of these proposed alterations were primarily proposed by the Council. They all had their origin outside. The Council, it is true, did originally propose a few alterations; but these were of only minor importance and did not materially affect the constitution of the College except so far as they will secure to the Council greater freedom with less responsibility, and get rid of a certain amount of external and salutary check and control. It is both significant and characteristic that, in spite of emphatic and repeated expressions of opinion by large numbers of Fellows and Members—amounting in the aggregate to many thousands,—the Council persists in its determination to ask for a new Charter which studiously ignores the important and radical recommendations twice carried in general meetings by overwhelming majorities, and without appreciable or calculable opposition. These recommendations are chiefly two—first, that in some way and in some degree Members of the College shall, under conditions, be empowered to vote in the election of the Council and be eligible to sit in the Council; and, second, that no alteration shall be made in the constitution of the College or in its relations or in any of its bye-laws without the consent of the Fellows and Members specially convened to consider and discuss them. These reasonable demands the Council apparently both rejects and resists. It is obvious that the matter will now have to be fought out before the Privy Council. There can be no doubt that after the confirmation of the minutes at the next Council meeting of the College the new Charter will promptly be submitted to the consideration of the Privy Council. Before this is done the Charter as now drafted should be submitted to a general meeting of Fellows and Members. It is only right that they should be able to understand definitely and in detail what the Council are applying for, whether the alterations be acceptable and agreeable or not. This is impossible unless the Charter itself, as it undoubtedly should be, is open to their inspection. The Council can surely have no objection to so reasonable a demand, and will, we trust, lose no time in calling a general meeting for the purpose. At the least, printed copies should be available for those who care to apply for them.

Annotations.

"Ne quid nimis."

WARNING TO THOSE NOT REGISTERED.

IT cannot be too explicitly stated that Tuesday, May 31st next, will be the last day on which degrees and diplomas can be registered, unless they have been conferred after a qualifying examination in medicine, surgery, and midwifery, held expressly for the purposes of, and under the conditions stated in, the Medical Act of 1886. We therefore counsel our readers in all parts of the empire who intend to register on old diplomas to do so without delay.

ARMY MEDICAL SERVICE.

IN accordance with the promise made to the deputation which recently waited upon him on the subject of the relative rank of the army medical officers, the Secretary of State for War has reconsidered the terms of the Warrant, and, "after consultation with the Director-General of the Army Medical Department," has altered them as follows:—"125*a*. Officers of departments of our army, not having honorary rank, shall rank as follows for purposes of precedence and other advantages attaching to corresponding military rank; but this shall not, except as provided in articles 265, 348, and 307*a*, entitle them to military command of any kind, to the presidency of courts-martial, courts of inquiry, committees, or boards of survey, or to precedence in their own departments over officers holding a superior departmental rank." This is followed by the classification of officers as given in the previous Warrant, with this difference, that they are stated to rank "as" instead of "with" the corresponding military grades. It is gratifying to us to find that the course adopted by the War Minister accords with that which we pointed out as being a satisfactory mode of solving any doubt which might be raised as to the military status of the various grades of medical officers. (See THE LANCET, April 2nd, p. 688.) But there is a question connected with the Army Medical Staff to which we attach great importance, and which, we fear, has been lost sight of in this scare on the subject of relative rank—that of rewards for professional services. Rewards for medical officers ought not, as at present, to be dependent

upon the recommendation of the military officers alone, and to be given only for services in the field; they ought to be conferred on the nomination of the Director-General, to whom all reports as to services rendered should be referred, and with whom the appreciation of these should rest and the consequent action upon them should originate. It has hitherto been the practice to grant honours and rewards solely upon the recommendation of the military authorities, who certainly cannot be deemed the best judges of the value of professional work. One result has been that, while for service in the field a fair amount of recognition has been bestowed, the more arduous work, in the hospitals and in the conflict with epidemics or in the important labours connected with the preservation of the health of the soldier by the adoption of sanitary measures, has been practically ignored. We would desire to claim for the head of the Army Medical Service a more potent voice in its practical working than has hitherto been accorded. No measure affecting the department should be introduced without his being taken into council, as we fear was the case with the last Warrant; and all rewards to medical officers should originate with him, or, if from any other source, should pass through his hands and be subject to his comments before being submitted to the War Minister. Were this the case, we should no doubt have rewarded for professional work officers who, however meritorious, are at present passed by without notice, because the military authorities, with whom the initiation now rests, are not competent to form a correct estimate of the value of such special service. It is not too much to expect that the head of an important scientific branch of the army, the labours of which can be truly appreciated only by an expert, should be consulted on all questions affecting its position and its mode of action, and that he should have the power to recommend to the War Minister for rewards or honorary decorations such officers as he may consider to have earned a title to them by valuable professional work.

POST OFFICE AUTHORITIES AND INFECTIOUS DISEASE.

IN a recent report on Kensington Dr. Dudfield draws attention to an important point in connexion with the existence of infectious disease in the families of Post Office servants. In 1882-83 correspondence was held with the Postmaster-General on the same subject, the Kensington vestry being desirous of having reported to them by the Post Office medical officers the existence of any such cases of illness, in order "to secure the isolation of the cases," and "to facilitate the removal of the sick to hospital when they cannot be safely treated at home." In answer, the Post Office authorities stated that a notice had been issued to the numerous medical officers of the department, in which they were instructed that, if in their district it be not already the rule to give notice of such disease to the sanitary authority, it would be well that such a rule should be introduced in the case of Post Office servants. But the letter, referring further to the question of admission to hospital, said that the department was not prepared to adopt compulsion. Within a month during the early part of this year Dr. Dudfield heard of three occurrences of scarlet fever in the families of postmen. The postal authorities very properly relieve their men from duty during such occurrences, and it appears that in these three cases they refused to allow them to resume their work until disinfection had been carried out. And it was the need for getting this process done that brought the cases under the notice of the vestry. Dr. Dudfield had, we think, ground for complaint, and hence he communicated the facts to the chief medical officer of the department, who in turn says that forms had been supplied to the postal medical officer of the parish for the purposes of communicating with the sanitary authorities, together with a recommendation to use them, but "the department is not prepared to employ compulsion in the matter." So far as we were able to judge, the question of compulsion in the former correspondence related to removal to hospital, and in this respect we entirely concur with the Postmaster-General that Post Office *employés* should not be treated differently from other members of the public. But we do think that, as regards notification, the department, which is maintaining the sick family at the public expense, might properly let the authority know, and might rightly require that the forms issued should, in every case, be used for the purposes indicated. It is known how largely children from such families as those of letter carriers attend elementary schools, and the Post Office department should not withhold from the sanitary officer the information which he needs in order to give effect to the provision of the Education Code issued by another Government Department as to the exclusion from school attendance of scholars living in infected houses. The Post Office authorities seem to claim some credit from the fact that the information does, owing to their requirements, at last reach the sanitary authority. But it is practically useless for the principal preventive purposes when it comes to hand only at the termination of the illness; and if it is the intention of the Post Office hereafter to require their servants to apply to the local authority for the purposes of securing disinfection, they might at the same time have regard to public health requirements, and instruct their officers to give the needed information at the onset of the disease, when it can be most usefully employed for all parties concerned.

FASTING FOR THE SAKE OF SCIENCE.

THE case of M. Cetti, who recently undertook, in the interests of science, to fast for thirty days in Berlin, was brought before the Medical Society of that city at a recent meeting by Prof. Senator. It should be said that the observations were not prolonged beyond eleven days, M. Cetti being informed that there was no necessity, from the scientific point of view, for him to continue his fast beyond a fortnight. During this period he was subjected to very careful observation. He is twenty-six years of age, and his weight was reduced from 57,080 grammes to 50,650 grammes during the eleven days, an average daily loss of 585 grammes. Starvation was not absolute, since he was allowed to drink water *ad lib.* He also smoked cigarettes, which, however, could not be shown to have had any influence on nutrition. His general condition remained very good. The quantity of chloride of sodium eliminated in the urine sank from eight or ten grammes on the first day to less than one gramme on the last days. The temperature was always within normal limits, attaining on the seventh and eighth days nearly the physiological maximum. On these days it reached 37·4° C. (99·3° F.), at other times varying between 36·4° and 36·8° (97·5-98·6° F.); but it never rose above that level. On these two days he was not very well, complaining of colic and suffering from hiccough. The pulse was normal, but very excitable, merely sitting up in bed causing an increase of the rate from 76 to 120. Professor Senator did not enter into further details, which are reserved for later publication, but described the very thorough methods to which M. Cetti was subjected. These comprised accurate measurements of the body and estimations of the excreta, examination of the blood as to its corpuscular richness and hæmoglobin capacity, and sphygmographic studies of the pulse. Observations on the vital capacity and estimation of the oxygen and carbonic acid of respiration were made daily. Dynamometric records were kept. The urine was most thoroughly investigated, chiefly by Drs. Müller and Munk, the analysis including estimations of urea, chloride of sodium, phosphoric acid, sulphuric acid, soda, potash and

ammonia, indol, phenol, acetone, and diacetic acid, and also of the digestive ferments which have been recently shown to be present in urine in certain conditions and absent in others. The saliva and the fæces were also submitted to examination. Professor Virchow, who was associated with Professor Senator in the observations, added a few remarks upon the object of the experiment; and M. Cetti, who was present at the meeting, gave his reasons for undertaking the fast, and stated that he had felt no appetite or hunger until he was told that on the next day he would be allowed to eat. The desire then returned to him at once, and he kept awake half the night. He expressed himself very gratified with the kindness and attention bestowed upon him by the scientific men who had taken him in charge.

THE EXAMINATIONS OF THE PHARMACEUTICAL SOCIETY.

THE *Chemist and Druggist* of April 9th contains the reports of Dr. Headlam Greenhow, the Government visitor to the examinations of the Pharmaceutical Society, on the examinations held by the Society in the years 1885 and 1886. The main facts are of considerable interest to the profession as well as to the public. The examinations reported on are three in number: the preliminary, the minor, and the major. The preliminary examinations are conducted by the College of Preceptors. In 1885, for the first or preliminary examination, there were 1278 candidates. Of these 588, or 46 per cent., were rejected. This proportion of rejections is said to be rather less than usual. For 1886 the number at this examination was 1305, of which 673, or 51·57 per cent., were rejected. The subjects are Arithmetic, Latin, and English. Arithmetic is the rock on which most of the candidates come to grief; in 1885, 209 failed in it alone. If the number of those who failed in it and in one or both of the other subjects be added the number of failures in arithmetic is raised to 476. In 1886, 238 failed in arithmetic alone, and 323 in it and one or both of the other subjects. The failures in Latin in 1885 were 252, and in English 240. Dr. Greenhow very properly insists on the seriousness of deficiency in arithmetic, a knowledge of which subject he regards as not only a test of a fair elementary education, but as absolutely requisite in dispensing and chemical operations. We are glad to see, in spite of indications of carelessness of the medical examining bodies on the subject of Latin, that the Society still insists on a knowledge of this subject in its candidates. In the minor examinations for 1885, of 744 candidates only 255 passed; 489, or 65·7 per cent., were rejected. Of the rejected candidates, 81 failed on account of general weakness in all the subjects, 171 in practical dispensing, 70 in chemistry, 64 in pharmacy, 43 in reading prescriptions, 22 in materia medica, 27 in botany, and 11 in two or more of these subjects. In 1886 the rejections at this examination were 530 out of 824 candidates, or 63·1 per cent. The subject in which the largest proportion of them failed was practical dispensing, which brought 205 candidates to grief. In chemistry 71 failed. The candidates for the major examination are much fewer, being 87 and 90 in the two years respectively, the rejections being 46·0 per cent. and 43·3 per cent. It is not the least proof of Dr. Greenhow's fitness for this duty that he has carefully considered the large proportion of rejections and has made suggestions, in the interest of fair examination, for an extension of the *time* in the minor examination, as well as an extension of the number of articles to be dispensed. He is quite satisfied of the general fairness of the present examinations, but thinks more *time* should be given. He urges, too—a very important point,—that the preliminary examination should be passed before the student is allowed to proceed with his proper studies. We are surprised that this is not already required. It is a grievous unkindness to students not to be severe in this requirement.

THE JUBILEE AND THE UNIVERSITY OF LONDON.

AT a special meeting of Convocation of the University of London on the 19th inst., the chairman read a communication from the Prince of Wales, inviting the co-operation of the University in the establishment of the proposed Imperial Institute. It was then resolved, on the motion of Dr. Baines and seconded by Mr. Lemon, that the jubilee of the University be celebrated this year, and that it is desirable to associate therewith the commemoration of the jubilee of Her Majesty's accession to the throne; and that a special committee be appointed to carry out the wishes of Convocation in this respect. Dr. Quain moved and Sir A. K. Rollit seconded the following resolution: "That an appropriate method of carrying out the wishes of Convocation as expressed at this meeting would be the placing of a statue or other similar memorial of Her Majesty in the University building. That this proposal is especially appropriate, inasmuch as the University was founded by a Charter granted by Queen Victoria, that Her Majesty is the visitor of the University, and was graciously pleased to open the University building in person, and that Her Majesty has recently granted to this University the high privilege of presenting an address to Her Majesty upon the throne in like manner as is allowed to the Universities of Oxford and Cambridge." The motion was unanimously agreed to, and the proceedings terminated with the passing of a third resolution, moved by Sir Philip Magnus and seconded by Mr. Lemon, to the effect that the statue or other memorial should be presented to the University at a special meeting or reception, at which the presence of Royal and distinguished persons should be invited.

EARLY WELSH MEDICINE.

IN our appreciation of the great advance in medical and surgical knowledge which has taken place in recent times, we are but too apt to undervalue the services of those who have laboriously laid the foundation of our art in remoter ages. Of a part of this indebtedness we are reminded by a short but interesting paper on "Early Welsh Medicine" by Mr. P. Rhys Griffiths, from which it appears that not only was the art of medicine cultivated by the Britons at a very early period, but that the Cymric practitioners during the mediæval and perhaps even in the earlier Christian epoch enjoyed a status and exercised a degree of skill by no means contemptible. Tradition tells us that up to the time of the Welsh king, Prydain (1000 B.C.), the knowledge of medicine and other sciences was usually found in connexion with the priestly office. After that date men of science and physicians appear to have formed a group by themselves. Regarding their methods there is little information, save that they seem to have relied chiefly on herbs as means of treatment. It is not till we reach the year 930 A.D. that any very definite information on medical matters is obtainable. About this time we learn from an Act of Howell the Good certain interesting particulars as to the position of the royal medical attendant. This functionary was evidently a person of some consequence. His "lodging was with the chief of the household," he held his land free, was allowed a horse, and received fees according to a fixed scale. Early in the thirteenth century the name of Rhiwallon, household physician to Rhys Grug, prince of South Wales, attracts especial notice. He was the most famous of the early Welsh physicians of whose life and work we possess reliable information, a copious contributor to the literature of medicine, for his time a practitioner of a very high order, and a man of true professional principle and personal integrity. The teaching and practice of Rhiwallon and his three sons were probably inspired in a greater or less degree by that of Hippocrates, who is more than once referred to in their writings, though the works

of the Persian and Roman teachers were also included among their studies. In this connexion it is noticeable that the humoral theory of disease was familiar to these early British physicians, while the prominent place assigned in their treatment to dietetics is no less significant. In regard to diet, indeed, they evidently possessed a fairly accurate though an empirical idea of what was or was not physiologically suitable. In diagnosis they relied almost exclusively on the evidence afforded by the general bodily condition and the appearance of excreta. The heart, pulse, and temperature revealed nothing to them. Their materia medica consisted almost entirely of organic substances, for the most part vegetable, and included some of the sources of our own most valued remedies, such as digitalis and the poppy. The plants employed in treatment were home-grown, as might be expected, and were administered either as external applications or in the form of infusions or decoctions. While thus occupying in medicine the position of herbalists, and nearly ignorant of scientific method, these early practitioners were in some respects well advanced in surgical skill. They were good lithotomists, they treated abscesses in the lung or brain by puncture and trepanning, and they incised the chest in empyema. In some other ways their ideas, as may be imagined, were of the most primitive order. Tumours they treated by applying the rump of a live fowl, feathered, to the part. Charms were probably less used at this than at an earlier epoch, but their employment in medical practice was not yet by any means unknown. The early practitioners of Wales appear, therefore, to have proceeded in their treatment on much the same lines as their brethren elsewhere, and were probably rather more than less intelligent in the methods they were wont to use.

ANTHRAX IN CHESHIRE.

FOR some time past alarming notices have been appearing in the local papers in reference to the alleged occurrence of anthrax on a farm in Cheshire, and questions were asked in Parliament on the subject. To these questions the usual stereotyped answers were given, containing, however, rather more than the usual amount of official wordiness. It was alleged, among other things, that the outbreak was due to "the insanitary condition" of the farm! We venture to say that "insanitary condition" never did and never will produce anthrax. It is fortunate that Dr. Hime, who is well qualified for the work, has been enabled to examine into the question on the spot, as some confusion has now been introduced into the matter by official declaration as to the simultaneous existence of "occult" swine fever. He has been resident on the farm for some days, and has made several post-mortem examinations of animals which have died there. He has stated that all these animals had anthrax, and that no symptom or sign of swine plague was to be found either before or after death. Dr. Hime also prepared numerous microscopical mounts, which, when shown to competent observers, left no doubt on their mind that the disease was typical anthrax. But there were numerous peculiarities in the case. In fact, the occurrence of anthrax in the pig is in itself uncommon, and its possibility is distinctly denied by Klein over and over again. But the fact that the animals lately attacked have survived so much longer than the first victims is noteworthy, the latter having mostly perished rapidly with symptoms of splenic apoplexy, while the later cases have lasted six, seven, and even eight days. Again, the splenic disorganisation was not nearly so marked in the latter cases. Dr. Hime caused very energetic steps for prevention to be taken. All animals which died during the visit were burned, and not buried according to the Privy Council Orders; perchloride of mercury was liberally used instead of chloride of lime. The floors were ordered to be dug up and the earth burned, the walls to be scraped and disinfected with the perchloride, &c. The unfortunate farmer has not only lost some £600 worth of stock, but has suffered grievously from the restrictions of the authorities. Because some pigs were ill, all the healthy stock and their milk &c. were put under a ban. Dr. Hime strongly represented the unnecessary hardship of this to the authorities, and we believe considerable relief was then afforded. We hope to be able shortly to give a fuller account of this remarkable outbreak. The disease has also made its appearance in Romney Marsh.

A MINISTER OF HEALTH.

IT is announced that Earl Cadogan, Lord Privy Seal, and the Right Hon. C. T. Ritchie, President of the Local Government Board, have been invited to join the Cabinet. The news of Mr. Ritchie's promotion will be received with much satisfaction by those who have the health interests of the country at heart. We have many times commented on the need for this recognition of the importance of the duties which devolve upon Mr. Ritchie's department; it is indeed extraordinary that the country which sets an example to all other nations in the estimation in which it holds sanitary progress, both as regards life and commerce, should ever exclude from the Cabinet the statesman who presides over the branch of administration which is concerned with this subject. In Mr. Ritchie's case there is the further argument that his high abilities must render his services of especial value. We fear there is not just now much hope for domestic progress, but Mr. Ritchie's presence in the Cabinet should ensure immediate attention being directed to those subjects in which the future of England is involved, and certainly amongst these must be reckoned the placing of the sanitary service on a better footing than at present. The hope that has for long been entertained, that improved methods of local government would be seriously undertaken by successive Ministries, has been hitherto grievously disappointed, but recent public statements of the President of the Local Government Board have shown that they have not been forgotten. Probably all that is wanted is the necessary opportunity for bringing them before Parliament. We trust that Mr. Ritchie's relation with the Local Government Board may be continued until this is afforded, and that he may have the direction of the legislation which we may now anticipate will follow.

THE TITLE OF "DR." AMONGST DENTISTS.

THERE has been a keen discussion in one of the dental periodicals about the use of the title of "Dr." by graduates of American colleges who are in practice here. All the writers equally disclaim any intention of decrying the D.D.S. or D.M.D. which is legitimately gained after a reasonable term of residence, but their arguments are aimed at those who, whether licentiates of one of our colleges or *sine curriculo* men, go out to America to obtain a diploma, too often a bogus one, and then return to practise under the title "Dr." It is freely admitted by the leading Americans themselves that the practice of dental surgery in all its branches is fully as well taught, theoretically and practically, in our dental schools as across the Atlantic. The editor of the *Journal of the British Dental Association* suggests that the title "Dr." should be dropped by those dental surgeons holding it in this country. Those conscientious practitioners, whether English or American, who are always welcome in our midst, might or might not agree to this; but those who abuse the title certainly would not, and it is the abuse that we wish to attack. The public, we think, do attach considerable importance to the title "Dr." amongst dentists, and therefore we would point out that this term, used in virtue of the D.D.S., does not signify a *medical* qualification, and, when honestly obtained, is

similar, and by no means superior, to our L.D.S. We are heartily glad to see that the Americans are awakening to the fact that their degree is fast falling into disrepute, and only last month a "diploma mill," with the title of "Druidical University of America," had its charter repealed; but it is not only these illicit manufactories that need looking after, but the recognised universities where diplomas are given after a few weeks' residence.

THE GASTRIC JUICE IN CANCER OF THE STOMACH.

PROFESSOR A. V. PELIA, in a "preliminary note" published in the last number of the *Vrach*, states that he has observed in several cases of suspected carcinoma of the stomach that the gastric juice, even after the addition to it of hydrochloric acid or pepsine, or both, remained incapable of peptonising coagulated albumen and fibrine; and not only so, but when added to normal or artificial gastric juice possessing peptonising power this cancerous gastric juice actually destroyed that power, showing that its own property was not of a merely negative character but of an active anti-fermentative nature. Professor Pelia suggests that in cancer of the stomach some new chemical principle of the nature of an anti-ferment may be secreted in the stomach. This is, he thinks, secreted also in these cases by the kidneys, for he has been able several times to show that the urine of a patient with anti-peptonising gastric juice possessed a similar anti-fermentative power. He remarks that Cahn and Mering have recently shown that an absence of free hydrochloric acid in the gastric juice is not a proof of the existence of cancer of the stomach; but he does not wish to express any opinion himself on the question of the significance of hydrochloric acid from a diagnostic point of view.

SANITARY WORK IN MUCH WOOLTON.

DR. B. B. JOLL'S report on an outbreak of fatal measles in the Much Woolton urban district raises two points worthy of notice. In the first place, the sanitary authority appeared to be much astonished at his attendance at their meeting, and the chairman had to explain to them that their medical officer of health had not come there to assert any right, but only as a matter of courtesy and with a view to any explanations that might be required on his report. That such a statement should have been necessary implies, we fear, a very scant appreciation of their duties by the authority. No medical officer of health has an actual right to be present at all meetings of the sanitary authority, unless indeed such right forms a condition of his appointment; but many such officers do make it a practice to attend, and many authorities either require or are only too glad to have the advantage of their presence. The Order of the Local Government Board requires the attendance of the medical officer of health at such stated times as the sanitary authority may direct; for it is assumed that such authorities stand in need of their skilled adviser in matters relating to health whenever sanitary topics are under discussion, in precisely the same way as they need the attendance of their clerk when legal and administrative topics are being dealt with. The episode at Much Woolton implies that hitherto the sanitary work has been done without the sanitary adviser of the Board; and this is probably the explanation of the second point to which we would advert. We refer to a proposal on the part of this authority, with a population bordering on 5000, and in whose district twenty-eight deaths from measles have just occurred in a single month, to make an annual payment to the Prescot Hospital, now in course of erection some six or seven miles away, for the use of one solitary bed for the infectious diseases calling for isolation within their jurisdiction. Dr. Joll has cause to protest against anything so utterly ridiculous. If the Much Woolton Board have no intention of giving their district the benefit of hospital accommodation such as the Public Health Act intended them to provide, they had far better say so at once than go through the form of making a provision which is void of substance.

DEATH OF DR. ALFRED MEADOWS.

WE regret to announce the death, on the 19th inst, of Dr. Alfred Meadows, after a comparatively short illness. The deceased, who was held in high esteem by the members of the profession, was recently appointed a Justice of the Peace for Middlesex, and was well known in Masonic circles. We hope in our next issue to give a more detailed account of his career.

Sir Edward H. Sieveking presided at a meeting of the staff and students at St. Mary's Hospital on Wednesday last, to express the deep regret felt by all at the sudden death of Dr. Alfred Meadows. Mr. Field, the dean of the school, read letters from gentlemen unable to be present expressing sympathy. The chairman, in a touching speech, alluded to Dr. Meadows' many good qualities and the irreparable loss sustained by his death, and then called on Mr. Edmund Owen to move the following resolution, which was seconded by Dr. Montagu Handfield Jones, and carried unanimously: "That the staff and students of St. Mary's Hospital have received with poignant regret and sorrow the intelligence of the death of their beloved friend, Dr. Meadows; that young and old who have had the advantage of intercourse with him have learnt to admire his excellent qualities of head and heart; and that the staff and students of St. Mary's Hospital request Mrs. Meadows and Miss Meadows to accept the assurance of their profound sympathy in the irreparable loss they have sustained." A service will be held at All Saints', Margaret-street, to-day (Saturday), at 11 A.M.; and a special train will leave Paddington at 2.30 P.M. for Colnbrook, where the interment will take place.

THE BOWEL LESION IN TYPHOID FEVER.

How far ought the intestinal ulceration met with in typhoid fever to be considered pathognomonic? Is the detection of ulcers in Peyer's patches, presenting none of the characters of the tuberculosis or dysentery, to be taken as proof of typhoid fever, even in the absence of well-marked clinical symptoms? Are we justified in believing in latent typhoid from post-mortem evidence alone? Such are the questions which are suggested by an interesting *brochure* recently published by Dr. Vandyke Carter, upon "A Peyerian Ulcer Lesion of the Small Intestines, apparently new" (Bombay, 1886); and the answer he would impel us to give to them would be a decided negative. The material upon which he bases his paper consists of about ten cases, in natives (in whom typhoid fever is rare) suffering from symptoms described as remittent fever, and after death, which in some cases was due to perforative peritonitis, exhibiting more or less extensive ulceration of the small intestines. Constipation rather than diarrhœa was the rule; and in not more than one case did the "fever" run the course of typhoid. But Dr. Carter does not rely on clinical grounds to establish the non-identity between the intestinal lesion in these cases and that present in typhoid fever. He subjects the type of ulceration to a close scrutiny, and points out several prominent features of difference, the most striking being the absence in his cases of the excessive swelling and infiltration of the Peyer's patch that precede the stage of ulceration in typhoid fever. He inclines to the belief that these non-specific ulcers are produced by embolic or thrombotic plugging, and that this depends on septic conditions. That septic causes are adequate to produce in-

testinal lesions of this kind is not to be gainsaid; and we think that Dr. Carter has made out a case for further investigation. At the same time, with the knowledge we have of the various forms assumed by typhoid fever, or at any rate by cases classed together as typhoid, and the great variety and extent of the intestinal lesion in cases of this disease, we may hesitate at first to accept his conclusion. A less cautious observer than Dr. Vandyke Carter would doubtless have been satisfied with the detection of the numerous ulcers in the favoured seats of election, and the occurrence in many cases of perforation, to declare that the cases came under the head of typhoid fever, modified it may be by the conditions under which the disease occurred. Hitherto we have been led to rely upon the ulceration of the intestines as the only positive criterion of this disease; but now it will be necessary to review our position in regard to it, and it may be that we shall have to fall back upon the detection of the typhoid bacillus to determine the diagnosis.

MEDICAL OFFICERS OF HEALTH.

OUR attention has been directed to a recent appointment in which a gentleman has been selected as medical officer of health who possesses no sanitary certificate, in preference to another holding that of the University of Cambridge. It is but natural that some disappointment should be felt by the unsuccessful candidate, who has spent time and trouble in the acquirement of knowledge which would undoubtedly have been useful to the local authority had they elected him. It must, however, be recollected that these distinctions are not yet understood by the public, and that other circumstances than those of the possession of certificates frequently guide these bodies in the selection of officers. Sanitary medicine is still in its infancy, and it is only within the last few years that the special knowledge which it requires has become appreciated by examining bodies, and only during the present year that the General Medical Council have recommended that the subject should be separately taught at the medical schools. It would therefore be expecting too much if we were to cavil at a local authority for neglecting to recognise the value of the evidence of special training which is afforded by the possession of certificates in sanitary science. Progress is necessarily slow, but the disappointment which is felt by such a circumstance as that to which we refer must serve as no discouragement to those who are looking forward to a career in public health. We do not doubt that in the future preventive medicine as a public service will occupy all the position it deserves.

EPIDEMICS OF MEASLES.

THERE have been during the past six months numerous severe epidemics of measles. In the metropolis there was a diminution in the fatality from this disease during 1886, as compared with the average for the decennial period 1876-85, but since the commencement of this year several localised epidemics have occurred. In a similar way measles has been widely prevalent in several of the large towns and cities of the kingdom. In Liverpool 472 cases and 70 deaths came under notice between April 1st and 14th, and during the month of March there were 788 cases, of which 107 were fatal. At the last meeting of the Health Committee, Dr. Taylor, the medical officer of health, stated that there was no hospital accommodation, and that for want of this the disease had spread, and many lives had been lost in consequence. In Sunderland there is also an extensive prevalence of the disease, the fatal attacks in the four weeks of the period March 19th to April 9th having been 17, 29, 19, and 26 respectively. And again, in Aberdeen, an epidemic commenced at the close of last year. Thus, 127 cases of measles were reported in the months of November and December, 158 in January, 762 in February, and during March there were no less than 1653, with 138 deaths. Measles is unfortunately a disease against which hardly any precautions are taken by the majority of parents; many being under the false impression that every child must have the disease sooner or later, and therefore the sooner it is over the better. But measles, like small-pox or scarlet fever, is contracted from an antecedent case, and hence it can to a large extent be avoided. Isolation of cases in hospital is not so easily effected as in several of the other infectious fevers, because the disease is so infectious in an early stage when it cannot positively be recognised, and consequently the mischief is often done before prophylactic measures can be adopted. But in a large proportion of cases the spread of the disease could be prevented if parents and school officials only took pains to check the dissemination of the infection. Measles is at times a very fatal disease, and hence it is one that ought to be prevented as far as prevention is possible. Thus, whereas in 1886 the deaths in England and Wales for scarlet fever were 5895, from "fever" 5831, and from small-pox 284, there were no less than 11,576 fatal attacks of measles.

ISLE OF WIGHT SANITARY ADMINISTRATION.

THE Isle of Wight rural district is becoming proverbial for its sanitary difficulties. Another has just arisen. A man who is certainly not a pauper—he being in receipt of his club money—contracts small-pox. No hospital is available except that at the workhouse, and the patient distinctly refuses to allow himself to be isolated there if he is to be regarded as a pauper. Dr. Groves, the medical officer of health, manages, in the sanitary interests of his district, to get him removed there, and the relieving officer is to be asked to make an order for his admission after the admission has been effected. Thus the man is made a pauper whether he likes it or not. The subject in its legal bearings having been discussed by the authority, Dr. Groves was instructed to confer with the clerk and the workhouse medical officer as to the best line of action in future cases. We agree with Dr. Groves that there is nothing to confer about. The workhouse hospital is not intended for such cases; it is illegal so to use it as long as it belongs to the Poor-law authority, and the sanitary authority fails to make any other provision. Until that provision is made there must be constant risk of a deadlock, and such risk cannot be put off by requesting the medical officer of health to take part in a conference with his Poor-law colleague.

GRANULOMA FUNGOIDES.

PROFESSOR KAPOSI, in a paper lately read before the Imperial Medical Society of Vienna, stated that he had seen seven cases of mycosis fungoides (three being males) and of these five had died. He discriminated three clinical types of the affection. In the first the patient suffers at the commencement from a scaly eczema of the trunk, sometimes associated with very severe itching. After from one to three years the spots on the skin become prominent and glistening; an infiltration takes place into these small nodules, which disappear or sometimes break out in other parts. In the course of months or years large fungating tumours appear on healthy skin, attaining the size of a fist, having a bluish-red colour, occasionally dense or very soft and easily compressible. These tumours are mostly seated on the trunk; next on the face, extremities, and scalp. They sometimes disappear with remarkable rapidity; new ones arise in other parts and attain colossal dimensions. Some tumours ulcerate, the ulcers having excavated margins; and after the disease has lasted some years, death takes place from fever, marasmus, or pulmonary or pleural complications

In the second type, instead of eczema, there is an eruption of red, urticarial spots, whitish or fawn-coloured in centre, and somewhat dense to the touch. These wheal-like formations persist, extend, and become brown in colour, and the appearance is that of scleroderma or even lepra. All these formations may disappear and occur again, but the spots do not itch; and they ultimately are changed into nodules, which become fungating tumours and ulcerate, taking on the characters and the clinical course of the cases of the first type. The third variety, examples of which have not been seen by Kaposi, consists in the development of the fungoid tumours, without any antecedent process. In speaking of their histology, Kaposi differentiated them from leukæmic tumours, and disputed the discovery of cocci made by Schiff and Hochsinger; he adhered to his previous conclusion that the condition must be regarded as "sarcomatosis cuti." It is not absolutely incurable. Erysipelas is sometimes followed by a complete disappearance of the tumours, and arsenic was to be recommended. This drug was being taken by the patient shown by Prof. Kaposi to the Society—a man thirty-six years of age, who had suffered from the disease since 1875.

SMALL-POX AT PLUMSTEAD.

EVERY epidemic of small-pox is preceded by indications that the disease has a high power of infectivity, and we therefore cannot but regard with some anxiety a localised outbreak of this disease at Plumstead. In the week before last six cases of small-pox were removed to the hospitals of the Metropolitan Asylums Board, and last week a seventh case occurred in the same locality. It is now reported that these patients contracted the disease from a man who had come direct from Port Said, or, rather, from some other persons who in their turn had been infected by him. However this may be, sufficient time has not yet elapsed to show whether the outbreak has terminated, or whether we may expect its still further development. The sanitary authority for Woolwich, the district adjoining Plumstead, are unfortunately without the aid of the services of a medical officer of health, and there is ground for serious apprehension that London may thus be involved in great difficulties for want of the proper machinery for dealing with any immediate extension of small-pox in that locality. We trust the attention of the Local Government Board will be directed at once to this matter, and that the Metropolitan Asylums Board, upon whom the burden of expense of small-pox in London falls, will themselves use their influence with the Woolwich authority for preventing any such calamity as that we indicate.

TREATMENT OF CATARRHAL JAUNDICE.

DR. GLUZINSKI, writing in a Polish journal, states that in cases of catarrhal jaundice he has found excellent results follow the treatment recommended by Krull—viz., the repeated injection into the bowel of large quantities of cold water. This increases the peristaltic action of the intestines, and removes any mechanical obstacle to the flow of bile. Again, as has been shown by Röhrig and Mosler, who injected large quantities of cold water into dogs, the bile is thus rendered both more liquid and more abundant, so that it more easily overcomes any obstruction. At first water at 59° F. is injected into the bowel until the patient complains of a feeling of distension in the abdomen. He is then made to retain it as long as possible. Most patients manage to retain two litres for from a quarter to half an hour. The next day the enema is repeated, but with water about 4° higher. The temperature is again raised on each succeeding day, but when 72° have been reached no further increase is made. The reason of the increase is that the repeated introduction of cold water is apt to irritate the mucous membrane of the bowel. Altogether four or five enemata are sufficient to produce the desired effect. The increase of the biliary secretion may be judged of by the colour of the fæces. Of course, the diet is attended to in order to prevent a recurrence of the affection.

WINDSOR HOUSE DUST.

THE Windsor Town Council have had under consideration a proposal of one of their members to compel householders to provide movable receptacles for house dust, and thus give facilities to the dust collectors to remove this material. This proposal was not adopted, but it is one which the inhabitants of Windsor might readily carry into effect without compulsion. The serious delay which is now caused by the emptying of fixed dustbins must add largely to the cost of collection, and ratepayers would be acting in the interest of their own pockets in adopting a method which would effect an enormous saving in the time of the workpeople employed. There is, moreover, the great additional advantage that this method would prevent the large accumulations of offensive matter, which are now almost inevitable. Although the motion was rejected, it may be hoped it may come before the sanitary authority in some other form. The Town Council are now actively engaged in considering the steps which should be taken for the improvement of the health condition of their district, and certainly so important a subject as the removal of house refuse deserves serious attention.

INTUBATION IN LARYNGEAL DIPHTHERIA.

DR. NORTHRUP (*Medical Record*, Dec. 11th, 1886) advocates the practice of intubation of the larynx originally suggested and practised by Bouchut, and later introduced with greater success by Dr. Joseph O'Dwyer, for the relief of dyspnœa in laryngeal diphtheria. Amongst the advantages claimed for the method, he cites the simplicity of the operation and freedom from shocks, the fact that no objections can be raised to it on the part of friends, and that the subsequent care of the case requires no trained attendant. The inspired air is admitted into the lungs moist and warm; and subsequent tracheotomy is not precluded. One notable objection is the difficulty of swallowing fluids that is experienced, at least at first; and there is a danger lest the false membrane be detached and thrust into the trachea before the tube. The cases in which the method has been practised with relief to laryngeal obstruction amount to 165; and the recoveries amount to 28·5 per cent., a percentage which Dr. Northrup does not think could be shown by tracheotomy, and is the more encouraging in view of the novelty of intubation and the few hands by which it has as yet been practised.

INFECTIOUS DISEASES IN BRUSSELS.

M. DESTRÉE, in presenting the Belgian Academy of Medicine with a chart showing the course of infectious diseases in Brussels during the last six years, remarked that a glance at the chart would show that a very considerable diminution had taken place in all infections but one—viz., diphtheria,—which had been steadily increasing, until in three years the number of cases had been quintupled. He had fancied, as it is thought by some that tetanus has some relation to the keeping of horses, that possibly the occupants of the poultry-yard might in some way cause diphtheria. He therefore injected croupal membranes into pigeons, but always without result. He, however, was much struck, while attending two children in a family for diphtheria, by noticing that all the fowls and pigeons, besides the cat, died during the children's illness.

THE MANAGEMENT OF POST-PARTUM HÆMORRHAGE.

DR. SCHÖNBERG, of the Lying-in Institution in Christiania, writing on post-partum hæmorrhage, states that the number of cases in which this occurred to a serious extent during the years 1876-1884 was 54 out of a total of 2533 labours—i.e., about 2 per cent. of all cases. He appears to have but little faith in ergot for immediate arrest of violent hæmorrhage, either administered internally or as ergotine injections. In the case of women subject to hæmorrhage he advises a course of tonic strengthening treatment during pregnancy. When hæmorrhage occurs the coagula must be expelled by external manipulation, and then he finds that the most advantageous plan of immediately arresting the flow is to close the os uteri by compression. He refers to Hamilton's paper in the *Edinburgh Medical Journal* for 1850, and to Fasbender's similar plans described in 1869, without apparently any knowledge on the author's part of Hamilton's previous work. The Norwegian surgeon introduces the fingers of one hand into the vagina, the tips reaching to the anterior fornix, and pressing the anterior lip of the os backwards. The other hand grasps the uterus externally, anteflecting it while the fingers compress it from behind against the fingers of the other hand, the os being thus mechanically closed. Dr. Schönberg is inclined now to prefer cold to hot injections, notwithstanding the great estimation in which the latter are beginning to be held. He warns obstetricians not to administer irritants too freely, as they set up nausea, and this adds to the condition of collapse. He has, however, latterly been in the habit of giving teaspoonful doses of a concentrated solution of common salt with excellent results.

ACTION OF DRUGS ON GASTRIC MOVEMENTS.

SOME excellent researches are still in process of conduction by Schütz, on the action of some medicaments on the movements of the stomach. Emetine, tartar emetic, apomorphine, strychnine, in a less degree caffeine, veratrine, chloride of barium, nicotine, and pilocarpine in small doses, act as direct excitants of movements of the stomach, which become spontaneous and of abnormal character. Muscarine directly stimulates the terminal ramifications of nerves, in causing generalised contractions of the stomach. Physostigmine, digitaline, scillitine, and helleborine produce an increase in the excitability of the muscular coats in such a fashion that the stomach at a given time is agitated by generalised and prolonged contractions. Actual paralysis of the auto-motor centres has not been observed, but chloral, urethane, morphine, pyrophosphate of zinc, arsenic, as well as nicotine and pilocarpine, in large doses, have caused weakness of the gastric contractions. Paralysis of the terminal branches of the nerves has only been obtained by atropine. Ether and chloroform suppress the excitability of all the innervation apparatus, but only during the time when the stomach is exposed to the direct action of the vapours. During anæsthetic sleep the gastric movements are not influenced.

A SYPHILITIC PLACENTA.

M. DEBRAY described at a recent meeting of the Brussels Anatomical and Pathological Society some peculiar appearances presented by the placenta of a woman who said she had had syphilis a year before her confinement, but who certainly had chancres and a specific roseolous rash at the time. The confinement was at term, and the placenta was removed with some difficulty three hours after the child was born. It was hard and abnormally small. Microscopic examination showed the presence of connective tissue fibres and of numerous plastic elements lying between the connective tissue bundles and forming arterio-sclerotic rings round the vessels.

THE "VICTORIA" DISASTER.

WE regret to see among the list of missing passengers from Newhaven to Dieppe by the ill-fated steamer *Victoria* the name of Mr. F. T. A. O'Meara, L.R.C.P.Lond., M.R.C.S.E., resident accoucheur at King's College Hospital. Mr. O'Meara intended spending a short holiday in Paris, previously to entering on his duties as house-surgeon to Sir J. Lister on May 1st. He entered the medical department of King's College in 1881, and was a prizeman in anatomy surgery, clinical surgery, and obstetric medicine. He also obtained the special prize in Diseases of Women and Children instituted in memory of the late Dr. Tanner. Mr. O'Meara was one of the most intelligent students at King's College, and had gained the affection and regard of all his teachers, fellow-pupils, and colleagues. His loss—for we fear that there is now little hope of his having been saved—is deeply deplored by everyone who knew him.

ALBUMINURIA IN DIABETES.

DR. A. POLLATSCHEK of Carlsbad has published (*Zeitschr. f. Klin. Med.*, xii., 4) some statistical results of the systematic examination of diabetic urine for albumen, with a view to determine whether the occurrence of the latter varies in proportion with the amount of sugar. He found that out of 1187 specimens containing sugar, in amounts varying from traces to as much as 5 per cent., there occurred more or less albumen in 437. The percentage (37) was almost the same, when reckoned on the cases examined in 1885, as on those of 1886, showing a curious uniformity. By grouping the specimens of urine according to their richness in sugar, he shows that there is no constant relation between the amount of albumen and of sugar—the lowest number of albuminurics (29·1 per cent.) occurring in cases of urine with a minimal quantity of sugar, and the highest (43·8 per cent.) in urines having from 2 to 3 per cent. of sugar.

INSPECTORSHIPS OF EXAMINATIONS.

THE Branch Councils in the different divisions of the kingdom are busily engaged in selecting names for recommendation to the General Council in May for appointment as Inspectors of Examinations under the Medical Act of 1886. These appointments should not be mere sinecures, and the profession will expect that they shall be made with much care and impartiality, so that the bodies may all feel that their work is to be ably and impartially judged. The Branch Council for England will meet mainly for this purpose on May 2nd.

COMA FROM ANTHRAX.

THE interesting and in many respects remarkable case which is recorded in another column by Dr. Reilly is perhaps most noteworthy from the insignificant attention given by the patient and his friends to the "boil" at the back of his neck. The state in which the patient was found might have been due to very many causes, but the brief, though clear history, the occupation, and the presence of the malignant pustule, proved sufficient to establish the true nature of the case. It is to be regretted that a necropsy was not allowed.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—M. A. Norbert Michot, the veteran Belgian botanist, at Mons, in his eighty-fifth year. Staff Surgeon-General Dr. Karl Ritter Heidler von Egeregg of Vienna, in his seventy-seventh year

EMPLOYES OF OMNIBUS AND TRAMWAY COMPANIES.

IT is strange that we should still be asked to direct attention to the hard case of the drivers and conductors of omnibus and tramway companies. It really needs no medical knowledge to see the injustice of exacting sixteen hours' work a day from these officials. Such hours give no fair time for rest, or recreation, or home life. It is pitiable to see the men at their principal meals, bolted furtively, often in the car, and before the passengers eager to be off. If the cupidity of shareholders is so great as to blind them to this cruelty, legislation should be invoked. We are opposed to over-legislation. It should not be necessary to invoke the assistance of the Legislature for such a purpose, but if the end cannot be secured otherwise, this step must be taken. The Legislature grants great privileges to tramway and omnibus companies. It has a right to insist that they discharge their duties to the public, and "are merciful to" their men as well as to "their beasts." We have before us a petition to the members of the House of Commons, signed by numerous medical men, urging the reduction of the hours. We heartily support the petition.

ELECTRIC LIGHTING IN THE HOMERTON INFIRMARY.

THE guardians of the Hackney Union have provided their new infirmary at Homerton with electric light, acting on the recommendation of their medical officer, Dr. Miller. Altogether there are 110 incandescent lamps, each of which is of sixteen-candle power; of these many are used for illuminating the corridors, the greater number of the remainder being in the six largest wards, containing in each sleeping accommodation for forty patients. Thus, for the lighting of a ward, the lamps are arranged in groups of three, and four groups are found sufficient, an additional incandescent lamp being provided for night purposes. There is no doubt that electricity, as compared with gas, affords considerable health advantages, and it is probable that the success which has attended the use of this light in the Homerton Infirmary will lead to other institutions following the example which has been set them. The motor power has been provided by a small alteration of the machinery used for pumping water.

ARMY HOSPITAL CORPS IN THE UNITED STATES ARMY.

WE learn from the Washington Army and Navy Register that a law has been passed providing for the organisation of an Army Hospital Corps, and that the Surgeon-General is about to bring it into operation as soon as possible. In the first instance, it will be raised by volunteers from the regiments of the line, but it is probable that afterwards it will be kept up by recruits specially enlisted for this service.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The veterinary school, which has increased the number of its students threefold during the last ten years, is now raised to the position of a *Hochschule* or university.

Gratz.—Dr. Rudolf R. Jaksch von Wartenhorst has been appointed Extraordinary Professor of the Diseases of Children.

Prague.—Dr. Friederich Ganghofner has been appointed to the Chair of the Diseases of Children in the German University.

AT the annual graduation ceremonial in connexion with the Edinburgh University on the 20th inst., the degree of Doctor of Law was conferred upon Professor Kölliker of Würzburg.

ON May 8th the Federation of the Italian Hygienic Societies will hold its first Congress in Florence. The sittings will last till the 10th and among the proceedings will be a discussion on the new code of public hygiene submitted to the Italian Senate by the Prime Minister, Depretis, and a paper by the Senator, Professor Pacchiotti of Turin, on the "Vaccinazione Anti-rabica" of Pasteur. The great *feste*, of which during the first three weeks of May the Tuscan capital will be the seat, form an attraction of which the promoters of the Congress will avail themselves for enhancing the success of their inaugural meeting.

WE regret to notice the death, on the 3rd inst., of Mr. John Kirkman, at his residence at Brighton. The deceased, who was in his ninety-third year, was for forty-five years (1831 to 1876) superintendent of the Suffolk County Asylum. His name was well known in connexion with the non-restraint system of treatment of the insane.

OUR contemporary the *Echo* kindly gives prominence to the report that one of the few physicians in Brooklyn opposed to vaccination has contracted small-pox from a patient, and that there is little hope of his recovery. We hope he may have a better fate than his folly deserves.

THE President and Council of the Medical Society of London will give a conversazione at the Society's rooms, 11, Chandos-street, Cavendish-square, on Monday, May 2nd. An oration will be previously delivered by Sir William Mac Cormac, F.R.C.S.

DR. W. JULIUS MICKLE was elected some time ago a vice-president of the section of Psychological Medicine and Nervous Diseases at the International Medical Congress.

SIR SPENCER WELLS and Professor BILLROTH have been appointed Honorary Members of the German Surgical Society, which is now in session at Berlin.

A BILL to amend the Acts relative to lunacy has just been issued.

ABSTRACT OF
LECTURES ON MALARIAL FEVERS.[1]

BY W. NORTH, B.A., F.C.S.,
LATE RESEARCH SCHOLAR OF THE GROCERS' COMPANY.

LECTURE I.

THEIR DISTRIBUTION AND THE GENERAL CONDITIONS UNDER WHICH THEY PREVAIL; HISTORY OF THEM IN THE PROVINCE OF ROME.

THE wide distribution of malarial fevers, their disastrous effects upon the population of countries in which they prevail, and the obstacle they constitute to all material progress, are not generally realised; whereas this subject is one which should attract the attention of Governments, inasmuch as these diseases materially increase the cost of administration. We as a nation have had a vast experience of them, and the literature of the subject is enormous, but withal little or nothing has been done towards understanding their etiology, or the precise conditions necessary for their existence or production.

If we examine the malaria chart of the world, we cannot fail to be struck by the gradation of the disease from the Equator to the Poles, and by the characteristics of the countries where it prevails. They are briefly countries where nature has her own way, and swamps, jungle, and

[1] Delivered at the London Institution, April 18th, 1887.

virgin forest abound. The map suggests a relation of the disease to temperature and water. If we compare the malaria chart of Europe with a physical map of the Continent, the relation of the disease to low land, abundant water, and hot, moist climate is very evident. Make the same comparison between a physical map of Italy and the map of Senator Torelli, showing the local distribution of the malaria, and the relation of the disease to altitude of the land, to water, and to temperature becomes a certainty. A study of the local distribution and variations of intensity of malarial fevers in the province of Rome shows us that local conditions have a most important bearing on the subject, and are therefore worthy of minute and careful examination; the general conclusions drawn from the consideration of large areas are still found to apply, and we find the disease to be generally most severe on low-lying land—in valleys and marshy districts. An examination of the distribution of the population in the province of Rome shows us that the usual order of things is reversed, and that, whereas in most civilised countries the population is densest in the plains and least dense in the mountains, in the province of Rome exactly the reverse is the case, and we find the mountain population stands to that of the plains in the ratio of sixty-eight to twenty-eight persons per square kilometre. This startling exception to a well-recognised rule leads us to inquire whether political causes have led to the abandonment of the plain and the malaria has simply stepped in and taken possession, or has the malaria itself been the cause of this abandonment; and in either case, when did the causes begin to operate? This is a historical question of the very greatest interest, and also of the very greatest importance to the subject, as tending to show what are the conditions necessary for the development and spread of malarial fevers. There is, however, one very great difficulty in the inquiry, and that is that malaria develops so slowly that, unlike the "black death" or the "sweating sickness," it does not attract the attention of the historian, and thus we are driven to argue its presence or absence and its intensity from the history of individual localities. The one great fact that we have as a starting-point is that in even the later days of the Roman Empire places now absolutely uninhabitable were not only inhabited, but held in high esteem by the Romans as health-resorts, so much so that the whole coast line of the province was covered with their villas and country houses, of which we can see the ruins to-day; and we know from the writings of Pliny and others that these villas were maintained in a state of luxury and magnificence, quite incompatible with the presence of such an enemy to health as malaria. There is some evidence, however, that the Pontine district was not all that could be desired even in those times, and Seneca advises a friend to avoid the neighbourhood of Ardea as not being very healthy. The invasions of the Goths swept away these villas and the high cultivation which surrounded them, the gardens and sacred groves were destroyed, and the population driven to the hills and secure places. Rome itself sank almost to insignificance, the destruction done by the Northern barbarians was never repaired, and the Campagna continued the battle-ground of Saracens, Lombards, rival popes, and barons, rendering a return to the ancient civilisation almost hopeless. In the seventh and eighth centuries we hear of fever, not isolated but wide spread, and of serious attempts by various popes to recolonise and cultivate the desolate country. The so-called Domuscultæ were established, with the double object of military defence and the reclamation of the land, on the site of places which flourished under the empire; but they do not appear to have been successful, or at most, only partially so, and though some of them exist at the present day—e.g., the Isola Farnese, the site of the ancient Etruscan City of Veii,—they are only aggregations of hovels, and so unhealthy that the population desert them in the summer and autumn.

Thus we see that the Campagna was abandoned from causes purely political, and nature was allowed her own way in a country where the unceasing toil of man is required to keep her under control. There can be no doubt that the reckless destruction of trees which has gone on steadily ever since it was begun by the Goths has played a most important part in altering the local conditions and local climate of the country, and in comparatively recent times the reckless cutting of timber in the mountains has caused the streams which rise in them to become uncontrollable and destructive, converting large areas of the lowland into bog and swamp, and rendering cultivation difficult and unprofitable. Our inquiry, therefore, leads to the conclusion that from political causes the local condition of the Campagna have been most profoundly altered, and that *pari passu* malaria has arisen and increased in intensity. A minute examination of the relation of local conditions to the disease will form the subject of the next lecture.

CLASS MORTALITY STATISTICS.

IT is not easy to overrate the importance of the subject of a paper read before the Royal Statistical Society on Tuesday evening last by Mr. Noel A. Humphreys, of the Registrar-General's Department. For elucidating the true value of local rates of mortality we have urban and rural death-rates, we have death-rates at different age periods, we have death-rates from different causes, and we have the death-rates of male adults engaged in different occupations. Till recently, however, we have known very little of the rates of mortality prevailing in the different classes of society. The object of Mr. Humphreys' paper was to discuss existing mortality statistics throwing light upon this important subject, and especially to examine critically the full bearing of the statistics issued during the last few years by Dr. Grimshaw, the Registrar-General of Ireland, dealing with the mortality prevailing in various social classes of the population of Dublin.

On account of the marked variations of the age proportions of the various social classes of the population, the only thoroughly satisfactory method for comparing the mortality statistics of such classes is by the construction of life tables, and the first part of the paper is devoted to the examination of the principal English life tables, and especially of those which throw any light upon the special subject of the paper. It is pointed out, in the first place, that the various English life tables based upon the general population show a marked and steady increase in the mean duration of life in recent years. The Carlisle table gives 39 years as the mean duration of life, whereas Dr. Farr's table, based upon the mortality of the 17 years 1838-54, gives 41 years; a table based upon the mortality of the five years 1876-80 gives 44 years; and the mortality of the next five years, 1881-5, shows a still further extension of life. Dr. Farr's healthy district table (based upon the mortality statistics of sixty-three registration districts in which the mean death-rate in the ten years 1841-50 did not exceed 17 per 1000) gives 49 years as the mean duration of life. Very few life tables based upon class mortality statistics exist. The most important examples of the class life tables referred to by Mr. Humphreys are Bailey's and Day's Peerage Tables, Ansell's Tables of Upper Classes, and Hodgson's Clergy Tables. Although not, correctly speaking, class tables, the Experience Tables of the Institute of Actuaries, and of the American Life Offices, throw valuable light upon the mortality of insured, and therefore of selected healthy lives, belonging, for the most part, to the middle and upper classes. Ansell's Upper Class Table gives a mean duration of life of 53 years—an increase of four years upon that by the Healthy District Table. Unfortunately, it appears that no life table of the working classes exists, although the mortality statistics issued by Dr. Grimshaw for the General Service Class in Dublin are such as to suggest that the mean duration of life in this class can scarcely, if at all, exceed that by Dr. Farr's Liverpool table—namely, 26 years.

An examination of these several life tables shows that the mean duration of life is mainly controlled by the rate of mortality in childhood. In all the life tables based upon the mortality statistics of the general population, the mortality during infancy and early childhood is so great that the expectation of life is greater at ten years of age than it is at birth. By Dr. Farr's English Life Table, for instance, the expectation at birth is 41 years, while at age 10 it is 47 years; and even by the Healthy District Table it is 49 years at birth and 51 years at age 10. Ansell's Upper Class Table, however, has such a comparatively low rate of child mortality that the expectation of life is 53 years at birth, which declines to 52 years at age 10. The variations in the annual death-rate of children under five years of age by the different

tables is very noteworthy; it is 65·7 per 1000 by the English Life Table (Dr. Farr's No. 3), and 39·4 by the Healthy District Table, while by Ansell's Upper Class Table it does not exceed 28·2. Dr. Grimshaw's statistics show a rate of only 22·0 among children of the professional and independent class in Dublin during the three years ending 1885.

Subsequently to childhood the greater vitality of the middle and upper classes, compared with that of the general population, is only somewhat less marked than it is under five years of age.

The most recent statistics of occupational mortality, constructed by Dr. Ogle, and issued by the Registrar-General, although not coming within the scope of class mortality statistics, as they only deal with adult males, throw, at any rate, a side-light upon the subject. Taking the mortality of all males aged 25 to 65 years as 1000, the relative mortality of males engaged in different occupations, after due correction for age differences, is shown by Dr. Ogle to range from 556 for "Clergyman, Priest, Minister," 599 for "Gardener, Nurseryman," 631 for "Farmer, Grazier," and 701 for "Labourer in Agricultural Counties"; to 1839 for "Miner (Cornwall)," 1879 for "Costermonger, Hawker, Street Seller," 2090 for "General Labourer (London)," and 2205 for "Inn, Hotel Servant." Many of these differences are evidently due far more to the influences and risks of occupation than to the mere influence of class; and it seems probable, however, that the wide difference between the mortality of labourers in agricultural counties and labourers in London must be mainly due to difference of housing and sanitary surrounding, as both classes probably suffer about equally from poverty, hard work, and hard living.

As information of the variations of child mortality in the various classes is essential to a full appreciation of the lesson to be learned from class mortality statistics, Dr. Grimshaw's statistics, notwithstanding defects, in great measure unavoidable in such an experiment, are especially valuable. They demand attention, in the first place, to the marked variations in the age distribution of the population in different classes. For instance, 1000 of Dr. Grimshaw's professional and independent class contain only 75 children under five years of age, instead of 121 in the artisan class. Then the proportion per 1000 of persons aged upwards of sixty years is 158 in the professional and independent class and only 63 in the artisan class. Mr. Humphreys shows that given identical rates of mortality in each of Dr. Grimshaw's four classes, at each age period, the death-rate at all ages would, owing alone to the differences of age distribution, range from 19·5 in the middle class to 25·2 in the professional class. The actual mortality in the classes differs, however, very widely in the other direction. If 1000 be taken to represent the mortality that would occur in each class if English life-table rates prevailed, the mortality in Dublin in the three years 1883-4-5, in Dr. Grimshaw's four classes, corrected for age differences, was equal to 632 in the professional and independent class, 1093 in the artisan class, 1333 in the middle class, and 1659 in the general service class.

The variations in the death-rates at different age periods in the several classes is especially striking. Thus, the mean annual mortality under five years is just five times as great in the general service class as in the professional and independent class. The difference at the next age-period, 5 to 20 years, is almost as great, and in each of the three age-periods of adult life the rates of mortality are more than twice as high in the general service class as in the professional and independent class.

The rates of mortality from various causes of death show fully as wide differences as do the death-rates at different ages. For instance, mortality from measles is nearly ten times as great in the general service class as in the professional and independent class; from whooping-cough, more than four times as great; from scarlet fever, more than twice as great; from diarrhœa, nearly three times as great; from typhus, nearly five times as great; from phthisis, more than four times as great; from lung diseases, more than three times as great; from convulsions, nearly thirteen times as great; and from violence, more than five times as great in the general service class as in the professional and independent class.

In concluding his analysis and discussion of Dr. Grimshaw's figures, Mr. Humphreys urges the necessity for further investigation in the same direction, and expresses the hope that medical officers of health and others may follow Dr. Grimshaw's lead and improve upon his statistics. Calling special attention to the near approach of the death-rates among the clergy and labourers in agricultural counties, he urges a stronger faith in the possibility of reducing the present wide range between the death-rates of the upper and of the working classes. Comparing the rates of labourers in agricultural counties and of labourers in London, it is suggested that this is due not so much to difference of poverty and hardship, but to the unhealthy homes and impure air from which the London labourer mainly suffers. The marked reduction in the working-class mortality, especially of infants, in the Peabody buildings, points, at any rate, to one effective method of bringing the mortality of the working classes within sanitary control. These and other similar facts indicate further possible reductions in the now rapidly declining English death-rate, the possible extent of which it is not easy to estimate.

THE LUNACY ACTS AMENDMENT BILL.

A MEETING of the Council of the Poor-Law Medical Officers' Association, to which workhouse medical officers had been invited, was held at their rooms, 3, Bolt-court, Fleet-street, on April 14th. Prior to commencing the business of the evening, a unanimous feeling of regret was expressed at the continued absence from the chair of Dr. Joseph Rogers, owing to severe illness. Clause 14, subsections 5 and 6, of the Lunacy Acts Amendment Bill was then discussed, and it was considered by the Council and visitors present that the alteration of the clause by the Parliamentary Bills Committee of the British Medical Association fully met the requirements of the case, and the secretary was requested to write to the chairman of that committee to tender the co-operation of the Association, in what manner it may be deemed advisable, with a view to having the obnoxious clause amended in the Commons. It was also suggested that the word *shall* be substituted for *may* in Clause 19, line 4, which refers to the payment of fees by the guardians under orders of the justices. The opinion of the secretary of the Lunacy Commissioners as to the great value of the certifying of pauper lunatics by the workhouse medical officer was considered important in reference to the amendments proposed.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chailey Rural District.—The general survey of sanitary districts carried out by the Local Government Board was extended to this area, and Mr. Graveley reports that as a consequence special attention was devoted to the drainage of several villages, to the abatement of nuisances from the keeping of animals and from filth accumulations, and to the enforcement of bye-laws. The current systematic inspections were also carried out during the year, and the dairies and milkshops were placed under supervision. The annual death-rate for 1886 was 15 per 1000. Six deaths occurred from typhoid fever, the disease originating in an encampment of people travelling in vans.

Coventry Urban District.—Owing to the prevalence of measles in the city, and its extension on such a rapid scale that hospital isolation could not check it, the closing of elementary schools became a necessity. Dr. Fenton explains that this step involved to the school managers and teachers a loss of £110, and hence that it is a serious one to adopt. It has generally been assumed that any loss of grant accruing from actual closure of schools would be made good if the closure were effected under the regulations of the education code; and it is certain that this should be so, otherwise a great hindrance is placed in the way of checking the spread of disease. In eight weeks ending with the second week of October, 570 fresh attacks took place, the schools being open. School closure was then resorted to, and the new attacks fell in three weeks from 76 to 10. They were then reopened,

with an increase to 23 and then to 42 a week. The fresh outbreak was found to be associated with one single school, and this being closed a second time, the disease subsided. Amongst the other matters dealt with in Dr. Fenton's report is an account of the use made of the excellent hospital for infectious diseases. As already implied, it could not be much used for measles, but 111 patients were admitted, 84 of these suffering from scarlet fever. Formerly risk followed on the sending of children home direct from the hospital, but under the arrangements now in force the communication of infection by this means has virtually been put an end to. Excellent work was also done during the year as to disinfection, 3140 articles and 91 houses being submitted to that process.

Halifax Urban District.—With a population of 78,287, the death-rate for 1886 was 22·2 per 1000. The borough hospital received 48 cases of infectious disease, 18 of these being typhoid fever; there were also 16 deaths from diphtheria in the borough, but no cases of this disease were received into the hospital. Amongst the matters needing reform to which Dr. Ainley refers is the scavenging of the roads, which is evidently badly carried out, causing needless offensiveness to the public, and especially to the tradesmen on the principal lines of traffic. The report of the sanitary inspector shows an excellent amount of work, carried out with efficiency and regularity.

Lytham Urban District.—During 1886 there was an increase in the number of cases of enteric fever, most of the attacks being associated with obvious faults in sanitary arrangements. Good work is steadily in progress in the matter of the removal of excreta and refuse from the vicinity of dwellings; and many of the old-fashioned privies, which cause such abominable nuisance, have been done away with. Complaint as to sewer ventilators has been found to be occasioned by fault in the tributary sewers. Both these and house drains joining them, if faulty, are likely to cause nuisance in an otherwise good system of sewers. Deducting the sad loss of life which occurred in the seven lifeboatmen who were drowned during the year, the death-rate was 16·3 per 1000, the birth-rate being 26. *Preston Port* is also in Dr. Eason's district, and as to it he states that he has had no occasion to inspect any vessel on account of infectious disease. We hope we may assume that inspection is not limited to such instances. The main value of port sanitary inspection is to secure a gradual improvement in the sanitary circumstances of the vessels and crews entering the several ports, and we regard it of even more importance to make a regular chronicle of the results of such preventive work than to record action taken on the occurrence of such diseases as would largely be prevented by systematic sanitary inspection.

Sunderland Port District—Considerable vigilance was necessary in this port during the past year owing to the recurrence of cholera in Europe. The number of vessels clearing from the port was 6982, and of these 2223 were inspected for sanitary purposes. There were 37 written notices served in consequence, all of which were complied with; and 289 verbal notices were also met in the same way. Of the British ships inspected, 15·9 per cent. were in an insanitary condition, compared with 10·2 per cent. of all foreign ships examined. This reflection upon British ships applies in the main to those engaged in the coasting trade, of which 5437 cleared from Sunderland, and the defects complained of relate not so much to structural defects as to great and inexcusable carelessness. The Danish and Dutch cargo ships entering the port are typical examples of cleanliness, and this notwithstanding the fact that they are usually built of wood, and that many are old. Mr. Harris has pointed this out in the hope of inducing a greater amount of care amongst the masters of British cargo ships.

Watford Urban District.—This town, which has at intervals suffered, a good deal from diphtheria, had some recurrence of the disease last year, but both diphtheria and other infectious diseases were isolated in the sanitary hospital. At one time the sewers were credited with mischief; they are now flushed every fortnight, and a disused chimney shaft is to be brought into requisition for the ventilation of one portion of the system. Unfortunately, houses are being built where they cannot at present be sewered, and hence cesspools are resorted to. It is to be hoped that modern bye-laws control the construction of such receptacles, thus keeping them at a distance from dwellings and water-supplies, and preventing any escape either by soakage or overflow. The death-rate during 1886 was 18 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5806 births and 3696 deaths were registered during the week ending April 16th. The annual rate of mortality in these towns, which had been 23·5, 21·6, and 20·5 per 1000 in the preceding three weeks, was last week 20·9. During the first quarter of this year the death-rate in these towns averaged 20·0 per 1000, and was 2·2 below the mean rate in the corresponding quarters of the ten years 1877-86. The lowest rates in these towns last week were 10·6 in Brighton, 14·5 in Halifax, 17·0 in Cardiff, and 17·8 in Derby. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had increased in the nine preceding weeks from 340 to 502, further rose last week to 510; they included 266 from measles, 115 from whooping-cough, 45 from scarlet fever, 32 from diphtheria, 26 from diarrhœa, 24 from "fever" (principally enteric), and only 2 from small-pox. These zymotic diseases caused the lowest death-rates last week in Birkenhead and Derby; and the highest rates in Norwich, Hull, Sunderland, Manchester, and Huddersfield. The greatest mortality from measles occurred in Manchester, Sunderland, Norwich, and Huddersfield; whooping-cough in Oldham, Plymouth, and Blackburn; and scarlet fever in Bristol. The 32 deaths from diphtheria in the twenty-eight towns included 21 in London, 2 in Bristol, and 2 in Liverpool. Small-pox caused 1 death in Greater London and 1 in Blackburn, but not one in any of the twenty-six other large provincial towns. Seven cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; no new case was admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 509, 417, and 363 in the preceding three weeks, rose again to 363 last week, and were 107 below the corrected average. The causes of 76, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Salford, Newcastle-upon-Tyne, Portsmouth, Preston, Norwich, Plymouth, and Derby. The largest proportions of uncertified deaths were registered in Liverpool, Huddersfield, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding four weeks from 26·2 to 22·9 per 1000, rose again to 23·7 in the week ending April 16th; this rate exceeded, however, by 2·8 the mean rate in the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·0 in Perth and 15·8 in Leith, to 27·3 in Glasgow and 33·7 in Aberdeen. The 593 deaths in the eight towns last week showed an increase of 20 upon the number in the previous week, and included 36 which were referred to whooping-cough, 28 to measles, 10 to scarlet fever, 7 to diarrhœa, 6 to "fever" (typhus, enteric, or simple), 4 to diphtheria, and not one to small-pox; in all, 91 deaths resulted from these principal zymotic diseases, against 127, 111, and 102 in the previous three weeks. These 91 deaths were equal to an annual rate of 2·6 per 1000, which was 0·3 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 31 and 33 in the preceding two weeks, further rose to 36 last week, and included 15 in Glasgow, 9 in Edinburgh, and 6 in Aberdeen. The deaths from measles, on the other hand, which had been 58 and 43 in the previous two weeks, further declined last week to 28, of which 14 occurred in Aberdeen and 10 in Glasgow. The 10 fatal cases of scarlet fever, including 4 in Edinburgh, 3 in Glasgow, and 3 in Dundee, exceeded those in the previous week by 4. Of the 7 deaths attributed to diarrhœa, showing a considerable decline from the numbers in recent weeks, 4 occurred in Glasgow and 3 in Edinburgh. The 6 and 4 deaths referred respectively to "fever" and diphtheria differed but slightly from recent weekly numbers; 2 from "fever and 3 from diphtheria were returned in Glasgow. The deaths from acute diseases of the respiratory organs in the eight towns, which had declined in the preceding four weeks, from 152 to 110, rose again last week to 126, and exceeded the number in the corresponding week of

last year by 4. The causes of 55, or 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 31·3 and 30·0 per 1000 in the preceding two weeks, rose to 34·1 in the week ending April 16th. During the first quarter of this year the death-rate in the city averaged 30·9 per 1000, the mean rate during the same period being but 17·8 in London and 19·4 in Edinburgh. The 231 deaths in Dublin last week showed an increase of 28 upon the number returned in the preceding week; they included 7 which were referred to measles, 6 to "fever" (typhus, enteric, or simple), 4 to scarlet fever, 4 to whooping-cough, 1 to diarrhœa, and not one either to small-pox or diphtheria. Thus 22 deaths resulted from these principal zymotic diseases, against 18 and 15 in the preceding two weeks; they were equal to an annual rate of 3·3 per 1000, the rates from the same diseases being 2·2 in London and 3·6 in Edinburgh. The fatal cases of measles exceeded the number returned in any previous week of this year, and the deaths from "fever," scarlet fever, and whooping-cough showed an increase upon those in the previous week. The deaths both of infants and of elderly persons also showed an increase upon the numbers in the previous week. Eight inquest cases and 9 deaths from violence were registered; and 78, or a third, of the deaths occurred in public institutions. The causes of 37, or 16 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Deputy Surgeon-General W. Cattell has been appointed Principal Medical Officer at Cork.

Deputy Surgeon-General Sir J. A. Hanbury, K.C.B., embarked on the 21st inst. for Gibraltar, to take over the duties of Principal Medical Officer.

Surgeon General Simpson, Sanitary Commissioner with the Government of India and head of the Indian Medical Service in Bengal, comes home shortly in anticipation of his retirement from the service next autumn.

INDIA OFFICE.—The Queen has approved of the following admissions to the Indian Medical Service:—To be Surgeons (dated September 30th, 1886): Bengal—Robert Joseph Macnamara, M.D., Herbert Wilson Pilgrim, George Brooke French, Francis Wyville Thomson, Edwin Harold Brown, Charles Norman Bensley, Selby Herriot Henderson, David Wilson Scotland, Charles Robert Mortimer Green, James Henderson Sellick, Edward Christian Hare, Frank Cecil Clarkson, John Gregory Jordan, John Digby Marsh Swinburne, Herbert Mackinlay Morris, Allan Rupert Postance Russell, James Morwood, M.D., and Edmund Alexander William Hall. Madras—Gilbert Capel Hall, Richard Henderson Castor, Frederick Geo. Maidment, Marie Joseph Toby Joinville Blancard, and Ignatius Purcell Doyle. Bombay—Blenman Buhot Grayfoot and Thomas Edward Dyson.

The following Officers, whose admission to the Indian Medical Service (Bengal) has already been notified, should have been placed in the following order:—William Grant Thorold, Patrick Hehir, Lionel John Pisani, Basanta Kumar Basu, Narendra Prasanna Sinha, Wm. Rice Edwards, Charles Mactaggart, John Fenton Evans, George James Hamilton Bell, Joseph Thomas Daly, Henry Fooks, Ernest Hudson, Arthur Cecil Deare, Arthur William Dawson, William Henry Banner Robinson, and Henry Anderson Sheppard.

ADMIRALTY.—Staff Surgeon Robert George Bird has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated April 11th, 1887).

The following appointments have been made:—Surgeon Thomas Nunan, to the *Wasp* (to date from 21st inst.); Mr. James P. Smith, to be Surgeon and Agent at Ullapool; and Mr. T. E. Mellerick to be Surgeon and Agent at Waterville.

RIFLE VOLUNTEERS.—5th Durham: Surgeon and Honorary Surgeon-Major P. Brown resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement (dated April 16th, 1887).—2nd Shropshire: George Hollies, Gent., to be Acting Surgeon (dated April 16th, 1887).

Correspondence.

"Audi alteram partem."

PUNCTURE BY TROCAR OF THE TYMPANITIC ABDOMEN IN PUERPERAL CASES.

To the Editors of THE LANCET.

SIRS,—May I be allowed to correct an error into which Dr. W. O. Priestley has inadvertently fallen, through my fault, in his note on the above subject in your issue of April 9th. After remarking that Major Franklin had said that he recollected some suggestion of mine concerning tapping in such cases, he adds, "and Dr. Hicks tells me that though he had suggested it as applicable under certain circumstances, he had not himself employed it." At the time Dr. Priestley spoke to me on this subject I did not remember that the last of four published cases which I had myself done was after a case of Cæsarean section. This case occurred in 1867. The report was read before the Obstetrical Society of London in 1868, and published in vol. x., 1869. In one of your contemporaries of that year the matter was discussed by others as well as myself, cases being narrated, and questions of priority raised showing that a number of quite independent practitioners had been relieving tympany by trocar; but it appeared that it had been employed in France earlier than here. It was afterwards discussed in the Clinical Society and published in its Transactions. I believe that with care this operation might be had recourse to more frequently than hitherto in cases of severe distension, where the depression caused by the generally accompanying peritonitis is much intensified by the pressure on the sympathetic system. In any case, I can answer for an enormous relief to the sufferings of the patient, and in some cessation of the constipation resulting from the over-distension of the bowels by the gaseous contents.

I am, Sirs, yours truly,

J. BRAXTON HICKS.

George-street, Hanover-square, April 18th, 1887.

To the Editors of THE LANCET.

SIRS,—In 1875, while house-physician at St. Bartholomew's, a case of scirrhus of the rectum was under my care. The patient suffered acutely from distension due to flatus. I therefore asked the house-surgeon to puncture the colon. His refusal may be taken as indicating that this little operation was not fashionable in those days. Hence this short illustrative note. I at once inserted a fine exploring trocar. While the gas was issuing from the cannula, the patient loudly proclaimed the relief attending its exit. One may fairly presume that the puerperal cases are not unfavourable to the performance of this simple but effectual operation; but surely the necessity for its employment seldom occurs.

I am, Sirs, yours faithfully,

April 20th, 1887. T. H. SAWTELL, M.D. Lond.

THE MARGARET-STREET INFIRMARY APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—Will you allow me, as one of those who have accepted vacant posts in the above institution, to submit, with all respect, that in your implied censure (in the annotation this week) of any who are not "avowed homœopathists" for accepting such vacancies you seem to take up an untenable position? The presence of homœopathists on the staff is either prejudicial to the interests of the patients or it is not. If the former, then the action of medical men—not avowed homœopathists—in joining the staff deserves your approbation, since by diluting homœopathic influence and diminishing homœopathic practice, they would tend, *ex hypothesi*, to augment the advantages and lessen the risks of the patients. If, on the other hand, homœopathists do *not* imperil the welfare of the patients, there is no justification for your condemnation of those who choose to serve in the same charity as they. You may hold that I have not stated the real point at issue, and maintain that it is professional honour which is at stake, in which case it appears to me you would exalt the importance of boycotting certain

members of the profession above the needs of those for whose benefit the charity exists. Doctors are made for man, not man for doctors. Supposing every member of the profession who is not a homœopathist, avowed or otherwise, had abstained from applying for the vacant post, one of two things must have happened—either the vacancies would have been filled by homœopathists or not filled at all. I have dealt above with the question of a homœopathic staff as affecting the patients; and as regards the other alternative of the posts being left vacant, it comes to this: that the leading journal of a so-called noble profession—a profession which is supposed to embody some of the grandest instincts of humanity—by implication advocates that patients should be left destitute of advice until certain offending brothers, guilty of the unpardonable sin of differing from the majority respecting therapeutic doctrine, shall be excommunicated. The interests of the poor are to be sacrificed in order that professional prejudice may be satisfied. For myself, I do not profess kinship with either "'path." I believe it my inalienable right to pursue any path (in my efforts to relieve the sick) which may, in my judgment, offer the fairest promise of success; and I think members of a charitable—a progressive, liberal, and scientific—profession, whose views are notoriously in a chronic state of change, should generously accord to others the same liberty of opinion they claim for themselves. Of this I feel assured: the public—and particularly the poor who may avail themselves of this charity—well know how to appreciate the moral courage of those who, at the risk of being branded as homœopathists, and boycotted accordingly, consider it an honour to serve the needy, though it be in the Margaret-street Infirmary. Even if exposed to contamination therein, we shall have the satisfaction of continuing, with enlarged opportunities, our quest for what is still undetermined—the truth about therapeutics.

I am, Sirs, yours obediently,

JOHN BECKETT.

Brook-street, Grosvenor-square, W., April 18th, 1887.

To the Editors of THE LANCET.

SIRS,—Permit me to state, in reply to the, no doubt unintentional, *suggestio falsi* contained in your paragraph anent the Margaret-street Infirmary, that I am *not* a homœopath, or any other kind of "'path," either "avowed" or covert; and in order that there may be no misunderstanding, I mean that I do not adopt the dogma of *similia similibus curantur*, or any other dogma, as my rule of practice, but aim as nearly as may be at a rational empiricism, ignoring no source of information claiming to be backed by clinical experience. My opinion on matters therapeutic cannot be more lucidly stated than you have yourselves expressed it in your leading article of to-day: "The ordinary practitioner differs from the homœopathic in being free to use any drug which he knows to be of use in the case, and that in any quantity experience shows to be best." I accord *in toto* with the positive side of this statement, though as regards the negative side I have yet to learn that homœopathic practitioners repudiate that freedom. Having, I need scarcely say, expected some antagonistic remarks on the matter, I was prepared to make the above statement, but being fully aware of the vast amount of prejudice which exists, I had determined to keep silence on the ethical side of the question. However, the moderation of your leading article, when dealing with the subject of homœopathy, induces me—whether judiciously or not remains to be seen—to depart from that determination, and to offer a few remarks. Considering your admission that homœopathy *has* done some service to medicine; considering the fact that I am frankly compelled to admit the debt I owe (I will not say to homœopathy, but at any rate) to individual homœopathic practitioners for the introduction to certain drugs, particularly in my own special department of practice (e.g., the tinctures of apis mellifica and of æsculus hippocastanum), as well as for the extended sphere of utility of others (e.g., bichromate of potash), of all of which I shall by-and-by have something to say, founded not upon any dogma but upon clinical experience; and considering that for the survival of one or two principles of therapeutic action—e.g., the value of minute subdivision in developing therapeutic power in comparatively inert substances (of which a dark example remains to us in the hydrargyrum c. cretâ of the B.P.)—medicine is, I believe, mainly indebted to homœopaths, I fail to see the logical consistency of maintaining in public relations a position of exclusiveness, especially on the surgical side, which is being, to my absolute knowledge, tacitly shelved every day in private practice by numbers of my professional brethren holding positions on the staff of hospitals connected with the great medical schools. Remembering, as I do, the outcry and prejudice aroused by the utterances of Dr. Bristowe and Mr. Jonathan Hutchinson at the British Medical Association's meeting at Ryde, I do not anticipate that these remarks will have any weight with those from whom I have the misfortune to differ. But perhaps they may serve, at any rate, to show that in medical as in other politics it is possible for two parties to arrive at diametrically opposite conclusions in perfect sincerity and good faith. With apologies for occupying your valuable space to such an extent with personal and therefore uninteresting matter,

I remain, yours faithfully,

Welbeck-street, W., April 16th, 1887. KENNETH MILLICAN.

SCOTTISH DIPLOMAS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 2nd we have your leader and Mr. Berkeley Hill's remarks as to Scotch and Irish qualifications, which are blackballed, in comparison with the "London diplomas" of L.R.C.P. and M.R.C.S., a subject not new to your paper, especially the "Scotch" part of the question. It is, I think, a great pity that gentlemen in the position of Mr. Berkeley Hill in the profession should deal in such statements, supported by him by no argument, good, bad, or indifferent. If you or he can find holes in the Scotch system of examination, in its results, in its methods or the degree of competency it insists on, in the breadth and completeness of the test for any Scotch diploma at all, why do you not do so? Why does not Mr. Berkeley Hill do so? Any person who likes to observe or inquire into the truth of this matter will simply find that all such statements are the result of a warped judgment—I might justly add, in very many cases of jealousy. The English public respects Scotch diplomas. That is a truth that will stand probing, and the success of men holding them as an integral part of the medical profession is notorious and above cavil. And why? The reason is not far to seek if Englishmen could put aside their "green spectacles," and I will state it briefly. The "evolution" of the English medical man is only now, in 1887, reaching a point that it had reached in Scotland centuries ago. In medical education and examination the Scotch system always did, and does yet, involve a complete curriculum, a complete examination, and a complete qualification. In England, as is well known, such has not been and is not the case yet, or until very recently. It is to become law in June, 1887; and I say it fearlessly that England is only now attaining a point of efficiency in matters of medical qualification that was attained in Scotland 250 years ago. This is true of medical education and examination. It is likewise true of the general education of the respective nations of Scotland and England. Scotland has led the van in advance by hundreds of years. I will prove what I say if you or your readers choose to contravert it; meantime, I must not encroach on your valuable space further.

I am, Sirs, yours faithfully,

Birmingham, April 16th, 1887. JAMES GILROY, L.F.P.S.GLAS.

A DOCTOR'S INCOME.

To the Editors of THE LANCET.

SIRS,—Various articles have been appearing in THE LANCET lately in regard to the position of the profession and the pressure on the general practitioners produced by the depression of trade, by the competition of hospitals, and so on. As we general practitioners have no voice but through the medical press, may I ask space for a rather long letter? The differences which separate consulting physicians and surgeons on the one hand, and family doctors on the other, are as wide and deep as those between barrister and solicitor. The general public do not know this. They imagine that any clever ambitious lad who can find the funds to squeeze into the profession somehow may rise to be Sir Somebody Something with an income of £15,000 a

year. If they knew how hopelessly improbable this is, and, further, knew what the actual financial prospects of a lad entering the profession (to be a family doctor) are, I cannot believe such numbers would continue to crowd in. I have made several calculations to enable me to arrive at a correct estimate of a general practitioner's income, which I submit. The first method I adopted was to add up the value of all the practices advertised for sale in various numbers of THE LANCET. The mean of 175 practices was £625 a year, which I consider as the average income of the family doctor. From this I deducted the working expenses. Taking into consideration surgery expenses, drugs, horses, carriages, assistants, dispensers, &c., I reckoned these as ranging from £25 a year to £500. I allowed three small practices to two medium and one large, and this gave the mean working expenses as £150 a year. Again, I reckoned the average cost of a medical education at £700. I have further estimated the cost of starting in practice, whether by making a practice or buying one (much the same as regards expense, I take it), at £1000. This gives £1700 capital sunk. On this I have reckoned 5 per cent. interest—i.e., £85 a year and £35 insurance premium to safeguard the capital, or £120 in all. My sum stands thus:—

Average gross income of a family doctor ...		£625
Average working expenses of do.....	£150	£270
Interest on capital sunk.....	£120	
Mean net income		£355

Further, it being usually necessary to live in an important thoroughfare, we pay higher rent, and therefore rates, than most men with incomes of £355 a year. We pay income-tax on the £120 a year, which enables us to recover our lost capital. Out of the remaining £355 we have to save for sickness and old age, and yet we pay income-tax on the whole. The pensioned classes pay no income-tax on the sums that Government virtually lays by for them. Finally, while carriages are a necessity in almost all practices over £500 a year, we pay tax on them on the ground that they are luxuries! If all this is considered, we can hardly estimate a doctor's income at much over £300 a year. This is the income of those who *have* practices, but there are hundreds of men who for lack of capital or other causes have no practice. They are assistants at salaries ranging from, say, £50 to £150 a year and their board; or they are ship's surgeons at a salary of about £80 or £90 a year and their food whilst on board; or they are house-surgeons or physicians at salaries ranging from nothing to £100 a year and their board. If all these men were taken into consideration, I feel sure the net income of a general practitioner would be found to range somewhere near £200 a year. I will now consider this question from another point of view to check my first results. Of the 175 practices I examined for the purposes of this letter, seventy-three, or nearly one-half, were purely country practices, and the mean gross income of these was only £442 a year, and therefore the net income probably not much over £200 a year.

Again, I will take a third point of view. I know of a practitioner who travels four miles for a charge of 1*s.* a visit, one-quarter of the cab fare that would be charged him if he hired a public conveyance. This does not sound profitable, but there is worse to come. Almost every country doctor has a benefit club included in his practice, for attending the members of which he receives from 4*s.* to 5*s.* per head per annum. I find that the mean sickness per head per annum, according to the experience of the Foresters, is 1·917 week, or say two weeks, per annum per head—equivalent, say, if the work is honestly done, to six visits per head per annum. This gives us from 8*d.* to 10*d.* per visit, including medicine. The parish doctor descends still lower. A vacancy was advertised recently in THE LANCET. A parish doctor was wanted for a district having an area of twenty-four square miles. I presume this doctor was not expected to *walk* his rounds? In that particular county one in every twenty-six of the population is a pauper. Allowing the visits to average seven per head, instead of six for the members of friendly societies (as women and children are included as well as men), the doctor will receive about 7*d.* per visit, out of which he has to find medicine and carriage expenses. Lower still are the "sixpenny" dispensaries of London. Lastly, every medical man does some work for nothing at all. With such rates of remuneration, how can the profession prosper? Do you wonder now that you hear daily of medical men dying utterly penniless? Remember that a doctor works on Sundays as well as week-days, by night as well as by day. It is more difficult for him to get a holiday than for almost anyone. Besides his hard work he has many special perils—perils of epidemics, perils of post-mortems, perils of exhaustion from want of adequate rest or sleep, perils of exposure at night when ill, and nowadays we must add perils of worry from vexatious actions or false accusations. Such is the state of affairs what is the remedy?

I am, Sirs, yours faithfully,

April, 1887. E. PAGET THURSTAN, M.D.

GASEOUS RECTAL INJECTIONS IN CONSUMPTION.

To the Editors of THE LANCET.

SIRS,—Dr. Burney Yeo's able Lecture on Gaseous Rectal Injections in Consumption is a welcome contribution on a subject which is exciting much notice, and, along with a paper which appeared in one of your medical contemporaries last December, will doubtless serve to bring Bergeon's method still further under the attention of practitioners in this country. After making some trial of it, I wrote to Mr. W. H. Perkin, F.R.S., regarding tests for discovering chemically the vapour of bisulphide of carbon in the breath, in order to find out if it was eliminated unchanged, and, in replying, he cautioned me on the injurious effects the bisulphide sometimes produces on the health of those working with it. That such cautions were not altogether needless was soon proved by the symptoms which overtook one of my patients: great irritability and moroseness, and a "tipsy feeling," which so distinctly amounted to incapacity for work or clear thinking as to be noticeable by others. My object is not to deter practitioners from the use of bisulphide of carbon vapour, but to advise that care should be exercised about the dose, and particularly about the frequency of its administration, for its elimination from the system appears to me much slower than that of sulphuretted hydrogen. As the symptoms did not come on till after many days of its use, I am inclined to trace them to accumulated arrears of imperfect elimination. Those who care to inquire further into these symptoms may refer to "Blyth's Poisons, their Effects and Detection."

I have now abandoned the use of the bisulphide, and adopted the sulphuretted vapour from the Eaux Bonnes water. Dr. Burney Yeo properly remarks on the inconvenience of obtaining this water. Perhaps Harrogate might be an available source, for the old sulphur well there contains 5·3 cubic inches of sulphuretted hydrogen per gallon, as against 1½ cubic inches per gallon in the water at Bonnes.

I am, Sirs, your obedient servant,

Ventnor, April 19th, 1887. JAMES M. WILLIAMSON.

"SURVIVANCE AFTER GUNSHOT AND OTHER WOUNDS OF THE HEART."

To the Editors of THE LANCET.

SIRS,—Should the following account of a case of wound of the heart, with which I have been just favoured by my old friend and correspondent Dr. James Martin of Portlaw, approve itself to your better judgment, I will thank you much to give it the benefit of your great publicity. It shows, at least, great faith in the curative virtues of bleeding, and may, so far, interest those *laudatores temporis acti* of our art who, if there be still any such amongst us, regret the disfavour into which that once much-admired remedy has fallen. But of this anon. Writing under date April 3rd instant, my kind informant says: "Reading your paper in THE LANCET to-day recalls to my memory a case in which I was interested so far back as 1827, while I was serving my second year's apprenticeship in the Queen's County Infirmary. It stands thus: 'A man who was going home from the town (Maryborough) attacked another (who carried with him a bayonet for his protection) with a loaded whip. The attack was repelled by a thrust of the bayonet, and this thrust floored the man, who fell down and became at once unconscious. He remained in this state during the fifty-three hours he survived, and meanwhile ninety-six ounces

of blood were taken from him, at intervals, during this time. Notwithstanding this deprivation, however, he did not die from loss of blood. On the contrary, the young man—who was just on the point of qualifying—who remained in constant attendance on him, maintained to his dying day that this patient would have lived had the surgeon in charge permitted him—the young attendant—to take more blood from him. On examination of the remains there was only one mark of injury on them—viz., a small triangular wound two inches below the edge of the ribs on the left side. The weapon seems to have traversed the stomach and penetrated the diaphragm, the pericardium, and the wall of the left ventricle. The pericardium contained a large fibrinous clot, which had undergone some organisation, but the fibrinous element predominated in it." It is, in either case, not easy to see how phlebotomy, even *usque ad deliquium*, could have prolonged this poor fellow's life. Yet such was one of his quasi-qualified attendant's belief; and this belief affords of itself another illustration—were any such wanted—of the fact that nothing takes so much killing as an old superstition.

I am, Sirs, your obedient servant,

Auriol-road, W., April 10th, 1887. WM. CURRAN.

To the Editors of THE LANCET.

SIRS,—With reference to the paper on the above subject by Brigade Surgeon Curran, in THE LANCET of the 9th inst., the following brief abstract of a "gunshot wound case of the heart" may throw a ray of light on the subject, and be deemed of sufficient interest to publish.

About ten years back, whilst I held medical charge of the R.A. division at Allahabad, North West Provinces, Bengal, a gunner of the division deliberately shot a sergeant of his own battery one night. The poor victim, an excellent non-commissioned officer, highly thought of, in some way incurred the ill-will of the murderer, a good-for-nothing, morose, ill-tempered man, of intemperate habits; and as the sergeant, accompanied by a comrade, reached the top of the stone staircase leading to his own quarters, a little after gunfire—i.e., nine o'clock at night,—the bullet struck him as he turned towards the left hand side to go to his own room. It was given in evidence, I believe, by the non-commissioned officer who was by his side, and had ascended the stairs in his company, as well as from information given me by others who were near enough to hear, that the poor fellow, when shot, turned round about a quarter-circle towards the spot whence the shot was fired—a doorway to the left and behind the stairway, fifteen to twenty feet only away—advanced a few steps towards the murderer, whom he was able to clearly recognise by the barrack-room and passage lamp, saying, as he did so, "Ah! is that you, ——?" or somewhat similar words, showing he saw clearly who it was that had fired the shot, and then reeled and fell to the ground. Of course, I am speaking from memory, but the unusual occurrence made a deep impression on my mind. Moreover, the whole facts of the case were fully recorded in the official reports and trial in the High Court. The post-mortem examination was also noted by me in the case-book at the time. Suffice it now to say that I found the bullet had struck the left ribs—fourth or fifth, as well as my memory recalls—external to the nipple line, then passed through the anterior portion of lung overlying the heart in that position, had passed backwards through the left ventricle, inflicting two ragged wounds, then through the root of the right lung, smashing two ribs on the right side, and was found in several large and small pieces scattered about the right axilla, and under the scapula of the same side. The weapon used was a Snider carbine, calibre 0·577, with full service charge of powder, and fired not over twenty feet away; yet, in spite of the terrible wound inflicted on the heart, there was evidence to prove that not only was the murdered man able to turn partly round, but also to walk a few paces, speak in a clear voice, and to clearly recognise his assailant.

Two facts may be considered interesting as bearing out Brigade Surgeon Curran's views regarding the murder of the native Kadir near Peshawur, and of his being probably able to speak and recognise his assailant after receiving the fatal wounds in the heart, and it should be remembered that a Snider bullet is over half an inch (0·577) in diameter, and usually inflicts a terrific wound, as I have seen a case where a similar bullet striking a man in the forehead tore out nearly the whole of the occipital bone in its exit. The case may also be interesting from a medico-legal point of view.—I am, Sirs, yours truly,

April 12th, 1887. J. E. FISHBOURNE, M.D., F.R.C.S.I.

To the Editors of THE LANCET.

SIRS,—In connexion with Brigade-Surgeon Curran's interesting paper on the above subject, allow me to draw attention to the following passage from General Gordon's Journals at Khartoum, page 17:—"One man received a wound in the chest; he lived eleven days, and died. The doctor found a bullet lodged in the centre of his heart, in wall of ventricle. The doctor has this heart in spirits. It was a ball weighing the same as our Martini-Henry bullet." Accompanying the paragraph is a drawing showing a section of the heart and the embedded bullet, thus proving that the General had seen and sketched the specimen. The record, apart from its pathological interest, is a striking instance of the catholic sympathies of the hero of Khartoum.

I am, Sirs, yours faithfully,

Brighton, April 7th, 1887. JAMES TURTON, M.R.C.S.

THE TREATMENT OF PLACENTA PRÆVIA.

To the Editors of THE LANCET.

SIRS,—I have read with interest Dr. Braxton Hicks' letter in your issue of the 9th inst., and fully endorse his supposition, "that no particular method of managing placenta prævia can claim being *the treatment*." Also the rule, "deliver as early as possible after the recognition that the placenta is about or athwart the mouth of the womb," with the addition, "do not leave the patient till she is delivered." In many cases, however, where there is a sharp loss after detachment of the placenta as far as the finger can reach and it is not possible to turn and plug the os by the leg or breech, I have found the air-ball pessary simply invaluable.

Some four or five years since I was called to a primipara—the smallest woman I ever delivered,—who had been in pain for some hours, and was losing freely. The history was that of placenta prævia. With the greatest difficulty I reached the os, which barely admitted the tip of my finger, and, finding the diagnosis correct, ruptured the membranes and detached as much of the placenta as possible. My patient suffered from a weak heart, precluding the use of chloroform; her abdomen was so unusually tender that any handling was impossible; the vagina barely admitted two fingers, and sharp hæmorrhage was going on. An air-ball pessary (I always carry one in my bag) was applied, which at once stopped the bleeding and so stimulated the os by its pressure that regular pains began almost immediately; the vagina at the same time being dilated by the artificial wedge. Twice the ball was withdrawn and reapplied—after the finger had been swept around the os,—being kept as large as the patient could bear it, so assisting dilatation that although the forceps were applied as soon as the os was sufficiently open, the perineum was uninjured and the recovery perfect. Since that time, in every case of placenta prævia, save one, I have adopted this plan, with the same success.

The exception mentioned was that of a woman who had been attended by a medical man from a cheap dispensary, and who had calmly watched her flooding herself pulseless—the condition in which I found her—from Friday morning until 11 P.M. on Monday, when the husband begged me to save his wife, if possible. Another medical man had been previously fetched, but he declined to undertake the case, and promptly retired from the scene. I found the room like a slaughter-house; the child's right hand and funis protruding from the vulva, the arm fortunately plugging the os, and the patient requesting that she might be allowed to die in peace without further torture. After administering eggs and whisky, the only available nourishment, I detached the placenta as far as was necessary, turned, delivered, and was able to leave the house within the hour. The patient recovered without any bad symptoms.

I am, Sirs, yours truly,

T. WALKER COFFIN, F.R.C.S. Ed.

Haverstock-hill, N.W., April 11th, 1887.

CURRELL'S CASE.

To the Editors of THE LANCET.

SIRS,—Having presented a numerously signed medical memorial to the Home Office praying that an examination should be made of Currell previously to allowing the law to take its course, as suggested in your columns, I give a few facts relating to the case. The Home Secretary responded to the prayer of the petitioners, but, so far as I can judge from the account in the newspapers, the examination was directed to his *present* state, not his past, which was the point raised by the petitioners. Since his execution, I have had Currell's verbatim confession placed before me. The opinion I entertain remains as before. It is confirmed by the statement. Currell says: "I have been for a long time accustomed to taking drugs, and have had frequent bouts of drunkenness. One of these bouts commenced about a week before the murder. During the whole of the succeeding week I had very few sensible moments, and, if I were to have my liberty for it, I have not the slightest recollection of how I spent the whole of that week." This was part of a confession written on Sunday night, within a few hours of his execution. It accounts for the "irrational state of mind" into which Mr. Justice Grantham says he must have been at the time, and justifies any petition that was forwarded asking for a medical examination. His apparent indignation at being thought irresponsible is made much of in the papers as evidence of his sanity. It is a well-known fact that many persons would rather go to gaol as rational beings than be liberated on the ground of unsoundness of mind. This fact also strengthens my argument. The whole case from beginning to end was one of moral insanity. Whether caused by drugs, alcohol, or not, the case remains the same, and aggravated by strong hereditary taint of mental disorder.

I am, Sirs, yours obediently,

L. FORBES WINSLOW, M.B.CANTAB., D.C.L.OXON.

Hammersmith, April 20th, 1887.

"PASTEUR'S METHODS."

To the Editors of THE LANCET.

SIRS,—In his letter under the above heading in your issue of the 9th inst., Mr. Vincent Richards expresses his anxiety that the dangers of Pasteur's prophylactic treatment for hydrophobia should be recognised, but he seems somewhat to ignore the much greater dangers of untreated bites from rabid animals. It is largely a question of statistics. Mr. Richards' reasoning about the necessity of the prophylactic inoculation being begun on the day of the bite rests on a misapprehension on his part of the facts of the case, for as regards length of incubation, there is all the difference between accidental bites and inoculation by trephining.

The published statistics up to the end of last year are as follows:—

—	No. of cases treated.	Deaths from all causes.	Mortality.
Paris	2730	45	Under 2 per cent.
Odessa	325	12	,, 4 ,,
St. Petersburg ...	118	1	,, 1 ,,
Moscow	112	2	,, 2 ,,
Vienna	96	0	—
Warsaw	84	0	—
Naples	43	0	—
Samara	47	2	Under 5 per cent.
	3560	62	Under 2 per cent.

During the present year several more deaths have occurred (some, very possibly, from the treatment), but they do not appear to have exceeded 12 or 15, bringing the total deaths from all causes among these 3560 persons to something less than 80, and giving a mortality not exceeding 2¼ per cent. In contrast with this we must place the average rate of mortality after bites from rabid animals, and this is probably about 16 per cent. So that it would appear that for every death occurring after Pasteur's treatment there would probably have been seven deaths had that treatment not been adopted. I do not maintain that this result is final and certain, but I think the evidence for it should not be lost sight of by those who are so keenly alive to the dangers of Pasteur's system of treatment.

I am, Sirs, yours &c.,

April 12th, 1887. R. J. P. S.

THE INTERNATIONAL STATISTICAL CONGRESS.

(From our Correspondent.)

UPWARDS of fifty representatives of statistical research met on Tuesday, the 12th inst. in the hall of the Ministry of Finance, under the presidency of Sir Rawson W. Rawson, to inaugurate the first International Statistical Congress. There had been other meetings of a similar kind, in which the statisticians of all countries assembled to compare their work—meetings composed of official delegates of different European states, and first set on foot in 1853 by M. Quetelet. But international jealousies had marred their efficiency—notably, on occasion of their permanent seat having been proposed to be fixed in Paris, when the German delegates intimated that in that case they either would not or could not attend, and so at the jubilee meeting of the Statistical Society of London in 1885 it was resolved to make the International Congresses independent of all Governments, representing simply the best science of each country, though, of course, quite open to receive whatever co-operation or support these Governments would vouchsafe.

Italy showed herself, as she always does, full of hospitality towards the visitors who had come to assist at the august occasion, and her Minister of Agriculture and Commerce, Signor Grimaldi, opened the proceedings by a brief address in French, in which, after indicating the value of statistics as a basis for legislation throughout the whole civil order, hygiene included, he extended to the Congress the welcome of the Italian Government.

Sir Rawson W. Rawson followed, also in French, of which he is a master, and gave a lucid narrative of the progress of statistical organisations, of the circumstances in which this first unofficial or purely scientific International Statistical Congress was being held in Rome, and of the rules and regulations which had been devised and approved for the "International Statistical Institute," as it is henceforth to be called.

The institute is an international association having for its object the development of the progress of administrative and scientific statistics: 1. By introducing, as far as possible, uniformity in the methods of compiling and abstracting statistical returns, and by adopting it in the compilation of statistical publications, with a view to a comparison of the results obtained in different countries. 2. By inviting the attention of Governments to the various problems capable of solution by statistical observation, and by applying for information on those subjects which have not hitherto received adequate statistical treatment. 3. By preparing international publications as a means of bringing into communication the statisticians of various countries. 4. By endeavouring, through the medium of publications, and, if practicable, by public instruction and other suitable means, to foster the general appreciation of statistical science, and to stimulate the interest of Governments and individuals in the study of social phenomena.

The sitting of Wednesday, the 13th, was exceptionally interesting. Professor Neumann Spallart, of Vienna, read a memoir on "Social Statistics," in which he expounded with characteristic clearness the method devised by himself of estimating with the greatest possible precision the social and economic state of a country in a given period, and of arriving at a numerical and approximately exact expression of the conditions, economic, social, and moral, of a nation. Restricting his data to Western Europe and the United States of America, he explained the "graphic system" whereby he proposes to determine the production of a given country for each year. On the same system he determines the mean of emigration, of crime, of disease, by what may be called a barometer of sociologic and demographic phenomena. He has convinced himself that he can thus arrive at approximate sociological forecasts, and with the same accuracy as is displayed in those of meteorology. An animated and most interesting conversation ensued, in

which the method was criticised from the point of view of the economist, the statesman, and the hygienist, and a detailed reply on the part of Professor Neumann Spallart brought the discussion to a close. The official report cannot fail to interest all scientific readers—not least the medical.

Of much more direct professional interest was the memoir of Dr. Léon Vacher, member of the French Corps Législatif and president of the Statistical Society of Paris. His subject was the "Diminution of Mortality and the Augmentation of the Mean Duration of Life in Europe." Having established, from official returns drawn from the various statistical bureaux of European States, that mortality is lessening and that longevity is increasing in the more civilised countries, he passed in review the causes which have produced, or which have contributed to produce, this result; first, among the latter—that is, the contributory—causes being, in his view, so far as France is concerned, the French Revolution, from the economic ameliorations it brought in its train and the more effective organisation of State medicine. He also drew confirmation of his doctrine from the sanitary condition of the young Italian kingdom, and dwelt on the immense progress made in a few years in public hygiene throughout the peninsula as highly creditable to nineteenth century sanitation. Turning to Rome, he said that from the hygienic point of view the city was scarcely recognisable as the same centre of population which existed before 1870, a fact which redounded highly to the praise of the Italian Government. Dr. Vacher's paper, which was heard with much attention, and emerged from the subsequent discussion with its main positions unshaken, will form not the least interesting of the publications of the Congress shortly to appear, with their author's revision, under the editorship of the Commendatore Ellena, secretary to the Ministry of Commerce and Agriculture.

The subject, so well introduced by Dr. Vacher, was followed up by a communication from the Cavaliere Bodio, of the statistical bureau of Rome, to whose unwearied and well-inspired activity the success of the Congress is largely due. This was a table, with a diagram on the "Lexis" model, for calculating and comparing the mean mortality at the different periods of life and in different countries. This the Cavaliere explained in a lucid exposition, and set forth many interesting facts on the ratios of births and deaths, on the malaria, and on the other sources of disease prevalent in Italy. The discussion was continued by Professor Levasseur and others, and a really instructive report was compiled for Signor Ellena's editorship.

Friday's sitting began with a report drawn up by Sir Rawson W. Rawson and Signor Maffeo Pantaleoni, on the "Means of preparing in each country a catalogue of publications, official and non-official, giving exact information on every one of the more important branches of statistics"; after which, at 3 P.M., Dr. Ole Jacob Broch, sometime Minister of State in Norway, and correspondent of the Institute of France, read a paper on the "Consumption in Europe of Nervine Excitants: the Alcohols, Coffee, Tea, Cocoa, Sugar, and Tobacco." Beginning with a retrospect of the introduction into Europe of alcoholic beverages, which have made immense strides from the early years of the eighteenth century to our own days, he showed by numerical data that the countries in which the consumption of these is greatest are Denmark, Belgium, Russia, and Germany; next come England and France. Italy is one of those in which the consumption is least. He maintained that in Norway the consumption of spirits is decreasing, owing to legislative provisions restricting their sale and also to the temperance societies. He then treated of the production and consumption of coffee, tea, and cocoa, showing that the production of coffee in the latter half of this century has doubled, while the countries that consume most of it are the Netherlands, Belgium, Norway, and Russia. Tea is mostly consumed in England, after her coming the Netherlands, Denmark, and Russia; while the countries in which the consumption of cocoa is greatest are Spain, France, and Switzerland. As in the case of the alcohols, so in that of these beverages, he supported his conclusions by financial returns. Passing next to the general production and consumption of sugar and the rise of prices, he noted that the production of Barbadoes sugar has probably attained its maximum. England, Ireland, and France are the greatest consumers of sugar—from 1880 to 1884 from two to three million tons of it having been used. Its consumption, indeed, is on the increase everywhere. Finally he demonstrated that the production and consumption of tobacco amounts to 500 millions of chilogrammes yearly, its consumption being greatest in the United States of America, in the Netherlands, in Denmark, England, Germany, Sweden, Norway, and France. The state revenue from the consumption of tobacco exceeds a milliard of francs, France deriving the most from it and Great Britain next. An interesting and animated discussion on Dr. Broch's essay ensued, in which the Swiss and German delegates took the chief part.

The remainder of the proceedings included no other topic bearing directly or remotely on medicine.

Saturday's sittings were the last, and, among the incidents of the forenoon, was the invitation of M. Inama Sternegg, of Vienna, to the members of the institute to attend the great Hygienic and Demographic Congress in the Austrian capital in September next.

M. Körösi, in the afternoon, read a paper in which he proposed to make international statistics uniform by the adoption of a table containing the following heads:—1. Statistics of houses and of the families occupying them. 2. Statistics of families according to the number of their members. 3. Agglomeration of the population and classification of cities. 4. Classification of the population by sexes. 5. Classification by age. 6. Bachelors, married men, widowers, divorced husbands, according to age. 7. Nationalities. 8. Religious creeds. 9. Unlettered (*analfabeti*), according to age. 10. Place of birth. 11. Distinction of groups under 2000 inhabitants in the country and above 2000 in the town. 12. Physical and moral disease.

A conversation then ensued on the next time and place of meeting, and it was finally resolved to convene the Congress for September, 1889, in Paris, under the presidency of Sir Rawson W. Rawson.

The Ministers of Commerce and Finance, Signors Grimaldi and Magliani, then congratulated the members of the International Statistical Institute on the success of their first Congress, and expressed their satisfaction at Rome having been made its seat. Sir R. W. Rawson gracefully returned thanks, and the Congress thereafter dissolved.

The proceedings were lightened by many acts of hospitality on the part of the Italian Government towards the members—admission to the first representation in Rome of Verdi's *Otello*, a banquet given by his Majesty King Humbert in the Quirinal Palace, and an excursion to the Falls of Terni (rendered famous by the description in "Childe Harold," and now utilised for the manufacture of steel plates for ironclads) being among the entertainments provided for the "congressisti."

Rome, April 17th.

THE RIVIERA IN 1887.

THE EARTHQUAKE.—MONTREUX.—LES AVANTS.

(By our Roving Correspondent.)

(Concluded from p. 802.)

RATHER severe strictures have been made in the French press and elsewhere *à propos* of the very general exodus which took place after the earthquake. Those who have made them have given no reasons to show that the move away was, under the circumstances, unwise or impolitic. Never, probably, in the history of the world, has a similar catastrophe occurred among a population so essentially mobile. At Nice and Monaco the thousands of visitors were practically all pleasure-seekers, and a large proportion of them were excursionists, furnished with return tickets, who had come for the Carnival. The hotels, as I have said, are for the most part not strongly built, and, although visitors may tolerate these structures for the sake of the southern sun, it is not to be wondered at that the prevalence of earthquakes should breed some degree of distrust in the builder's handiwork. Again, it must be remembered that at Nice and Mentone, where houses had been *lézardé* in all directions, the lighting of fires had become dangerous, and had, indeed, been forbidden, so that even invalids found it difficult to get a cup of warm milk or beef-tea. At Mentone the supply of good bread ran short, and the reflection could not but arise that in all probability a dislocation of water, gas, and sewer pipes had taken place, a state of things which involves consequences upon which we need not dilate. There was no question, be it remembered, of

persons running from the post of duty, but merely of pleasure-seekers abandoning a spot which had become unpleasant. Again, the effect of the earthquake upon the majority was, the writer believes, as follows. The first shock caused surprise, but not fear; and had there been no subsequent shock there would have been no genuine desire to leave the district. When the second shock came some fifteen minutes later, the sense of distrust was aroused; but the third shock at 8 o'clock, which forcibly brought home to everyone the possibility of continuance, was, we believe, mainly operative in causing the exodus by bringing to every thoughtful person the reflexion as to the number of similar shocks which his or her particular hotel was capable of withstanding. The incessant discussions of the subject became almost intolerable, and after a time was enough to unhinge the nerves of the most phlegmatic, and it was on this account mainly that a speedy removal from the immediate scene of the disaster became desirable, especially for persons who were not strong, and who found it difficult to sleep.

The fact cannot be too strongly insisted on that a considerable proportion of the houses along the Riviera have been very severely strained by the earthquake, and that substantial repairs will be needed in order to make them withstand even a slight recurrence of the shocks. The withdrawal of the visitors has given the inhabitants leisure to undertake the work of reparation; and we trust, in the interests of those who year after year repair to this region, that the task will be undertaken with the serious intent of rendering the houses as strong as human ingenuity can make them. Great praise is due to the authorities of the Paris-Lyons-Mediterranée Railway Company for the manner in which they met the unusual strain put upon their traffic regulations. Happily, no damage was done by the earthquake to the lines, and for a fortnight subsequently to Feb. 23rd a very large number of special trains were run, and all of them were absolutely full. Not only did no serious accident occur, but we did not hear that even a stray handbag or portmanteau was lost.

The loss of one is the gain of another. The serious misfortune which befel many of the places along the Riviera had the result of sending an influx of visitors to other places. Hotels in outlying districts which had been nearly empty suddenly enjoyed a great accession of business, and it was literally true that for a time every hotel along the Riviera westward of Nice and as far as Marseilles was absolutely crammed. The effect was felt further than this. Visitors driven from the Riviera were naturally afraid to return to northern climates at the end of February, and, accordingly, the tide set in towards Pau, Biarritz, Arcachon, and the Pyrenees, towards Meran in the Tyrol, towards the sheltered spots along the northern shore of the Lake of Geneva and our own southern coasts, which are at their best in the early days of spring.

Being desirous, after the earthquake, to get away from the incessant bustle and disquiet which the catastrophe naturally caused in all crowded places, I moved to an hotel not far from Cannes, which, although a fine house in a good situation, was, I had heard, almost empty. This I found to be true, and, on my arrival, I became the co-pensionnaire of some ten other people who were the only occupants of a magnificent building standing in a situation at once lovely and healthful. The chief reason of the emptiness of this fine house was revealed at dinner-time, when a veritable Barmecides' feast was served with most admirable solemnity to guests who unwillingly followed that golden theory of dietetics that "it is good to rise from table with an appetite." This hardly merits to be mentioned were it not for the fact that, in my opinion, much of the hotel feeding along the Riviera is second-rate. Of late years hotel prices have risen considerably, and with the rise of price there has not been, to say the least, a corresponding rise in the quality of the accommodation. The worst food which invalids, to say nothing of healthy persons, can take is second-rate French cookery. The finest climate in the world will not compensate for a diet of disguised garbage, and many of the *plats* which are handed at *tables-d'hôte* merit this description. The characteristic of second-rate French cookery (and there is very little that is first-rate out of Paris) is the absence of refinement or simplicity. When, for instance, a sole is handed to you smothered in a concoction of onions, strong herbs, and grease, you will not be wrong in assuming that this mode of cooking has been adopted as a means of smothering qualities which might prove less appetising than the mess which has been added by the *chef*. Fish has a delicate flavour of its own, but this fact is seldom appreciated, and there is also an utter ignorance of the fact that the varieties of flesh and vegetables have any characteristic flavour. The conceited *chef* who works under a miserly *maître d'hôtel* soon comes to think that any tough rags in the way of meat will serve as a vehicle for sauce, and hence it not unfrequently comes about that, after breakfasting on sour bread and chicory and lunching on rubbish, the person with a delicate stomach succumbs before dinner-time, and as he cannot eat the dinner he has paid for, but requires to be nourished on "extras" in his own room, the shortsighted proprietor, who only looks to the profit of the hour, fails to appreciate how serious is his responsibility in this important matter. I cannot too strongly urge upon delicate persons who are obliged to winter abroad the necessity of great care in the selections of hotels. The points which demand attention are: (1) aspect as regards sun and wind; (2) construction as regards safety, tranquillity, and health; (3) the size and ventilation of the public rooms; (4) the quality of the food, inclusive of the wine. Every hotel proprietor will do well to return to the good old custom of placing a sound "ordinaire" upon the table. All meals ought to be *vin compris*, and in writing for terms this point ought to be insisted upon. It is impossible for persons to pay five or six francs per meal for wine, and it is intolerable that they should be expected to drink so-called "claret" which has been opened for days and kept in a cupboard. The very small quantity of wine which is consumed nowadays ought to be included in the price paid for the meal. This custom still obtains in all localities which have not been ruined by English and Americans. Let those who have had experience in the latter houses only try the experiment by going to dinner at such a house as the "Hôtel des Bains" at La Condamine, and they will find that a modest four francs suffices to get a well-cooked wholesome meal, *vin compris*. To "please the English," hotel proprietors have been led into much lavish expenditure in the matter of gaudy decorations, carpets, and hangings. These things cost money, and, if they are to be kept clean, necessitate a great increase in the staff of servants. Carpets and hangings do not materially increase the warmth of a building, but they do undoubtedly harbour filth of all kinds and, if they be not kept clean, become a constant menace to health. These things are wholly unsuited for a southern climate, and they are especially unsuited for a climate where the mistral upon occasions raises clouds of dust. A glistening floor of tiles or polished wood or marble, kept bright by a daily sweep, is far better suited to the "sunny south" than are thick carpets into which the dust sinks and is forgotten, and in due time, under the influence of the sun, becomes instinct with life. Less hangings and better food must be the order of the day in southern hotels which are used as convalescent hospitals. After a sojourn of ten days near Cannes, and after the rush of persons going west had somewhat subsided, I moved away to the district at the north-east end of the Lake of Geneva, which has the reputation of enjoying a mild climate and of being a pleasant spot in which to spend the spring. Vevey, Clarens, and Montreux, which are almost continuous with each other, are situated along the northern shore of the Lake of Geneva. They face due south, and are protected by a range of high hills from the north, the protection from this source being more absolute at Montreux than elsewhere. The Lake of Geneva is about 400 miles due south of London, so that the sun is more powerful there than here. Again, it is about 1000 feet above sea level, so that the consequent rarefaction of the air increases the effect of the sun's rays upon persons exposed to them. Further, the mildness of the situation is said to be largely influenced by the proximity of the lake, and it is contended that this huge volume of water tends to equalise and increase the mean temperature of the district. There can be no doubt whatever that this district, especially Montreux, is well sheltered, but it must not be supposed that the warmth to be experienced there is at all equal to that which is felt along the Riviera. After spending the winter in the Riviera, and when the sun here gets too strong and a need is felt for a more bracing situation, then a move to the Montreux district is very desirable. One of the chief drawbacks to the latter place is the liability to fog, owing to the proximity of the lake. Arriving at Montreux towards the middle of March, I found every hotel in the place quite

full, owing to the influx of visitors from the south. I accordingly made for the hotel at Les Avants, which is some 2000 feet above Montreux, and consequently 3000 feet above sea-level. It was about 3 o'clock in the afternoon that I started from Montreux railway station. Montreux was enveloped in fog, which completely hid the sun and obscured all objects at the distance of a few yards. The ascent to Les Avants is rapid and continuous, and the result was that in a quarter of an hour the fog was almost all below me, and in half an hour I was in brilliant sunshine. The drive to Les Avants occupied about an hour and a half, and the road is excellent. Arrived there, I found the hotel situated in the centre of an amphitheatre of hills, which surround it on all sides except the south. The protection from wind is absolute, the sun exposure perfect. It was very interesting to notice how complete had been the change of climate in rising from Montreux to Les Avants. I had left a cold fog and draughty streets to rise into the brilliant warmth of the afternoon sun in a cloudless sky, and with scarcely a breath of wind. This absence of wind was very noticeable during the whole fortnight which I passed at Les Avants. From the point of view that all experience is useful, I may say that I had the good fortune to experience some very severe weather at Les Avants. The weather at the time of my arrival was mild and spring-like, the snow was all gone from the lower fields, and the crocuses were showing their many-coloured tips in abundance. Nearly forty hours' continuous snow, however, at the middle of March (at the same time that the severe snow-fall occurred in England and through Europe generally) changed the aspect of affairs. The snow lay nearly three feet thick, and gigantic icic'es hung from the overlapping eaves. It was very interesting to observe how comparatively little inconvenience was suffered from this very heavy fall of snow—a fall considerably heavier, probably, than any I have ever witnessed. The snow plough was sent down the road as a matter of course to a point to which another snow plough came from Montreux or some neighbouring village, and thus our communications were kept open without any difficulty whatever. The post came with all its proverbial regularity; and even the laundress (who lived at Montreux) was not hindered in her routine journeys for a single hour. Owing to the absence of wind there were no drifts, and by the early use of the plough the snow was not allowed to deprive us of our fresh air and exercise. The snow was, in fact, a source of great enjoyment, for it enabled us to return to the pleasures of winter. The little sleighs called *luges* were soon in requisition, and we had soon an opportunity of seeing how the eight kilometres of winding road which intervene between Les Avants and Montreux may be accomplished *en luge* in some half-hour. From the experience of a few days only it was made evident that mid-winter in these high regions must be very enjoyable, and certainly few things more exhilarating can be imagined than to scud along over the glittering snow at the rate of ten or fifteen miles an hour through the crisp air, illumined by a brilliant sun in a cloudless sky. When you have reached Montreux, the old adage "To go there, I trow, is easy enow, but how about getting back?" is apt to haunt the mind; there is nothing for it, however, but to shoulder your *luge* and get back by the short cut, which can be done in about an hour and a half; and a wonderful chest expander is this return journey. The hotel at Les Avants is good, and the proprietor does all in his power to make his guests comfortable. The writer went for three days and stopped fifteen.

BEQUESTS AND DONATIONS.—Among the numerous bequests of the late Mr. William Brough Phillimore, Hyde-park-gardens, are the following: To the Ventnor Hospital for Consumption, £200; St. George's Hospital, London, £200; Consumption Hospital, Brompton, £300; Royal Hospital for Incurables, Putney, £200; St. Mary's Hospital, Paddington, £200; Middlesex Hospital, £200; University College Hospital, £200; and King's College Hospital, £200.—The secretary of the Leicester and Leicestershire Provident Dispensary has received a legacy of £100 from the executors of the late Mr. G. A. Robinson.—The secretary of the Bristol Eye Hospital has received a legacy of £100 from the executor of the late Mrs. Peace of Devizes.—Mr. W. H. Williamson, of Bradford, has forwarded £50 to the Bradford Infirmary and £25 to the Children's Hospital, to be applied as the Boards of Management of these institutions think fit.

MANCHESTER.

(From our own Correspondent.)

OPEN SPACES.

THE praiseworthy attempts of the Open Spaces Committee to in some degree remedy the neglect in past years to provide open spaces in the centres of our crowded districts are resulting in a very fair amount of success. On the 9th inst. a plot of about one acre and a half, situate in Ardwick, was formally opened by the Mayoress, and there was a large attendance. The society has spent nearly £2000 in laying this plot out and providing swings &c. They will retain charge of it for the next two years, and then hand it over to the Corporation, through whom the land has been acquired. In the neighbouring suburb of Withington, a piece of land some thirteen acres in extent has been given by Lord Egerton, "to be used as a public recreation ground, open to the public free for ever." One of our members of Parliament, Mr. Houldsworth, in conjunction with Sir John Lubbock, is endeavouring to promote a piece of legislation having for its object the granting greater facilities to acquire land &c. for these purposes, making applicable to the whole country the provisions of the Metropolitan Open Spaces Acts.

ROYAL INFIRMARY.

It sounds at first rather strange to hear of donations coming from Germany to our local hospitals. The Royal Infirmary has just received £500 from a lady residing at Frankfort-on-the-Maine, in memory of her late husband, Mr. G. Kissell, who some years ago was in business here.

THE EPIDEMIC OF SCARLATINA

still continues, and shows but little abatement. Dr. Buckley medical officer of health for Crumpsall, in his report for 1886, just issued, referring to the disease in his township, speaks of his inability to get any reasonable proportion of patients suffering from scarlatina removed to the Monsall Fever Hospital. He advocates the provision of smaller hospitals situate nearer the patient's home, and where the friends would feel more in touch with their children than when they are two or three miles away. The Salford Corporation will soon have the question of hospital accommodation for infectious cases to face, they having recently sold their present building to the North-Western Railway Company, and the infirmary authorities have since refused to take more cases from Salford to their fever hospital at Monsall than they do under existing arrangements.

THE SHIP CANAL.

A large model of the proposed ship canal, lately exhibited here prior to going to the Jubilee Exhibition, brings before one's mind very forcibly the danger there may be of there being very little better than an open sewer in the docks and stagnant portions, unless stringent measures are adopted to render less polluted the Irwell and the Medlock, which rivers will form the chief feeders to the canal.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

At the annual meeting of this Association, Dr. Tatham, officer of health for Salford, was elected chairman for the ensuing year, and gave an address in which he took rather a pessimist view of the present position of State medicine, and of those who devoted themselves to its service. He, however, showed that there was ground for hope that in the not far distant future a change for the better would be inaugurated, and the status of officer of health improved.

ECONOMIC DIETARY.

The subject of the need for some systematic organisation for providing poor children of school age with cheap meals was recently discussed at a conference held at the Vegetarian Restaurant, Fountain-street. Mr. Sargant, of Birmingham, gave details of what had been done in that town, and it was pretty clearly shown that, without pauperising the people, nutritious meals, necessarily based largely on a vegetarian dietary, could be provided at a cost of less than one penny per meal; but that, from lack of knowledge among the poorer classes, it was impossible for them to obtain the result in their own homes. Hence the need of some organisation.

DUBLIN.

(From our own Correspondent.)

ACADEMY OF MEDICINE IN IRELAND.

A SPECIAL meeting of the members of the Academy will be held at the College of Physicians on the 26th inst., to consider the advisability of applying for Her Majesty's permission to prefix the word "Royal" to the present title of the Academy. The presentation of an address to Her Majesty on the occasion of her jubilee will also be under consideration.

PROPOSED AMALGAMATION BETWEEN TWO MEDICAL SCHOOLS IN DUBLIN.

The proposed amalgamation scheme between the medical school of the Royal College of Surgeons in Ireland and the Carmichael school, about which such sanguine expectations were formed, has again fared badly. At a meeting of the Council of the College of Surgeons last week the matter was under discussion, when the proposal was negatived by 11 to 7 votes. The result has not been unexpected by those who were aware of the difficulties which lay in the way of the proposed scheme.

SIR P. DUN'S HOSPITAL.

The chief maintenance of this hospital has been from the endowment by its founder Sir Patrick Dun, which heretofore has brought in an annual income of from £1200 to £1500. The non-payment of rents in Ireland, however, has gradually diminished this amount, and last year the sum accruing to the institution was only between £300 and £400. A special appeal has been made for funds, and it is to be hoped that it will not be made in vain. There is one circumstance connected with the medical and surgical staff which deserves to be circulated, and that is that one-third of the fees paid by the students attending the hospital is devoted to its maintenance. So far as I am aware, such an arrangement does not exist in any other Dublin hospital, and therefore every credit should be given for this generosity on the part of the medical staff of Sir P. Dun's Hospital.

CASE OF STRANGULATED HERNIA.

A female aged seventy was recently admitted into the Adelaide Hospital, under the care of Mr. Heuston, for strangulated hernia of the right side. On Mr. Heuston operating, he found that the right ovary and Fallopian tube were in a gangrenous condition, and therefore removed them. Such a complication is so rare that its occurrence is worth recording. The patient has made a good recovery, the wound having healed by first intention.

THE CONJOINT SCHEME.

The proposed scheme between the Colleges of Surgeons and Physicians seems at present to be in a very unsettled condition. The proposal of the College of Surgeons to combine with the Apothecaries' Hall of Ireland, appears to be resented by the College of Physicians, and I understand that they have intimated to the Council of the College of Surgeons that should the combination be carried out the agreement between the two Colleges will be at an end, and they will require to consider the entire scheme, especially with reference to the fees to be divided between the two corporations. If the scheme between the two Colleges is abandoned, the College of Physicians will probably regret their decision.

DUBLIN HOSPITALS COMMISSION.

The report of the Commissioners has not yet been issued to the public, and the delay appears inexcusable. The following are stated to be the main suggestions of the Commissioners, but I am not prepared to vouch for them. They recommend that a central board of control be appointed, to consist of the Archbishop of Dublin, the Moderator of the Presbyterian Church, the Roman Catholic Archbishop, the Chairman of the Dublin Hospital Sunday Fund, two members from the College of Physicians, two to be nominated by the Crown, and one each by the Royal College of Surgeons, the University of Dublin, and the Royal University; while three will be selected by the Dublin Corporation. The Government fund will be vested in this board, who will allocate the grants calculated on the amount of work done by the various institutions and the donations and subscriptions received by them. None of the present institutions reported upon are recommended to be closed, but the gradual extinction of the less useful hospitals is provided for, should the recommendations of the Commissioners be carried out.

The Lord-Lieutenant has appointed Dr. McCabe to be a medical commissioner of the General Prisons Board, Ireland.

Dublin, April 20th.

Obituary.

DANIEL RUTHERFORD HALDANE, M.D., LL.D. EDIN.

THE public and professional anxiety caused by the prolonged and serious illness of Dr. Rutherford Haldane was terminated by the announcement of his death, which occurred on Tuesday, the 12th inst. His illness was the outcome of a serious accident met with on Christmas Day, 1886, when he slipped on an icy footpath and fractured his right leg. For a considerable time favourable reports were issued in regard to his progress, and the anxiety of his friends was for the time allayed and a satisfactory recovery anticipated. Latterly, however, symptoms of obstruction of the circulation appeared, and under this serious aggravation of his condition his strength rapidly gave way, and he passed gently away without a struggle. The deceased gentleman held for many years a prominent position in the Edinburgh medical world. His death leaves a most noticeable blank in many leading medical interests of the city, and a deep feeling of personal loss on the part of his wide circle of friends.

Dr. Haldane was a son of the late James Alexander Haldane, so widely known as an Evangelist, as a disinterested Christian reformer, and as a chief founder of the Scottish branch of the Congregational body. After a liberal classical education Dr. Haldane commenced the study of medicine in the University of Edinburgh. He was an able and very successful student, giving thus early evidence of the ability that so conspicuously distinguished his subsequent career. In 1848 he graduated with honours as M.D., after which he spent two years on the Continent in the prosecution of further studies, and in acquainting himself with the more practical aspects of disease. On his return he acted as resident physician to the Royal Infirmary. His career as a highly successful extra-academical teacher was commenced by his undertaking courses in medical jurisprudence and pathology. He was also for a time pathologist to the Royal Infirmary. On the retirement of Dr. Alexander Wood from the College of Surgeons' lectureship on Practice of Physic Dr. Haldane took his place, and it was as a teacher of medicine and of clinical medicine also, on his appointment to the staff of the Royal Infirmary, that he gained the reputation of a great teacher, still so warmly cherished in the minds of his numerous students. He early became a Fellow of the Royal College of Physicians of Edinburgh, a body in the welfare of which he took the deepest interest, and which he has ably represented in its presidential and vice-presidential chairs, and by acting as its representative on the General Medical Council. He was also assessor of the General Council of the University of Edinburgh in its University Court, and his services to his *alma mater* were recognised by the conferring upon him of the honorary degree of LL.D. at the Tercentenary Festival. On the expiry of his term of office on the honorary staff of the Royal Infirmary, he continued his connexion with that institution, firstly as consulting physician and subsequently as one of its managers. In addition to his multitudinous public duties he engaged in a wide practice as a consulting physician, and he was a genial and capable arbitrator in the many weighty matters of professional importance brought under his notice by widely differing sections of the medical community. His personal no less than his professional qualifications gave him the position of a leader in the Edinburgh medical world and of a much-respected public man. In both spheres he is keenly missed, and deeply regretted.

HENRY GRENFELL, M.R.C.S., L.S.A.

MR. HENRY GRENFELL was born in 1837 at St. Just-in-Penwith, near the Land's End, and educated at Penare House School, Penzance. After having served an apprenticeship with Mr. W. H. Dodge at Penzance, he entered at King's College, London, in 1856, and, soon attracting notice as a diligent student and a skilful dissector, was appointed a prosector to the Royal College of Surgeons. He became a dresser to the late Professor Partridge and a clinical clerk to Dr. George Budd, and was most earnest and assiduous in the discharge of his ward duties. He took his double qualification in 1861, and settled at once in practice at Penzance. He was warmly interested in the Volunteer movement, and served as medical officer in every grade in the western division of the Duke of Cornwall's Royal Artillery, being Surgeon-Major at the time of his death. For some years he had been the acting surgeon to the Penzance Infirmary, and had acquired a wide reputation as a skilful, bold, and careful operator, and as an able exponent of the principles and practice of antiseptic surgery. His death was sudden and unexpected. He had always enjoyed perfect health until two or three weeks ago, when he began to complain of headaches and a slight discharge from the left ear, to which he paid but little attention. On the 9th inst. he suddenly became comatose, and trephining was resorted to, but he never regained consciousness, and died on the 10th inst. at 4 A.M. A post-mortem examination showed the existence of caries of the roof of the tympanum, and extensive purulent meningitis over the anterior lobes of the brain. By his early death at the age of forty-nine, the profession in West Cornwall is deprived of a most capable surgeon, and his family and numerous friends and patients will long regret the loss of a most genial, kindly, and true-hearted man.

DR. DANIEL WANE.

THIS gentleman, whose death was announced on April 5th, at the age of seventy-three, was a M.D. Edin., M.R.C.P. Lond., and a Fellow of the Medical, Medical and Chirurgical, and Obstetrical Societies. He had a large and high-class practice in Grafton-street, Piccadilly, where he practised for many years. His kindness of heart and intense conscientiousness in the smallest details of his profession won for him the love and esteem of all with whom he was brought in contact. He had retired from practice for the last four years, and died at his house in Fitzjohns-avenue from a seizure of an apoplectic nature.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—The following gentlemen have passed the examination for the Membership of the College:—

Balfantyne, J. W., M.B. Edin. | Rinder, A. W., L.R.C.P. Edin.

The following have passed the Public Health Certificate Examinations:—

Kiddle, W., M.B. Dub. | Robinson, E., M.R.C.S. Eng.

Dr. Woodhead has been appointed Superintendent of the College Laboratory.

UNIVERSITY OF ABERDEEN.—At the late Medical Graduation term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

DEGREE OF M.D.

Alexander, Lewis Daniel, M.B., C.M., Kilcreggan, Greenock.
Carbery, Joseph, M.B., C.M., Matale, Ceylon.
Cheyne, Walter Smith, M.B., C.M., Aberdeen.
Dickson, Matthew, M.B., C.M., Liverpool.
Fallon, Robert Hume, M.B., C.M., Clifton.
Fildes, Thomas, M.B., C.M., Urmston, Manchester.
Gerard, John, M.A., M.B., C.M., Aberdeen.
Hardie, David, M.B., C.M., Brisbane, Queensland.
Letters, Patrick, M.B., C.M., Dundee.
Smith, Ernest Barret, M.B., C.M., Twickenham.

DEGREES OF M.B. AND C.M.

Alexander, William, M.A., Fyvie.
Beveridge, Alexander Thomas Gordon, M.A., Aberdeen.
Brooks, John Harley, London.
Brown, Alfred Tennyson, Banchory.
Bryce, James, Aberdeen.
†Butter, John Soutar, Letham, Forfar.
Crevie, James, Newburgh, Aberdeen.
Crowe, William Christie, Aberdeen.
Dalgarno, James John Young, M.A., Aberdeen.
*Davidson, David Macdonald, Mauritius.
Duff, Charles Edmund, Turriff.
Fraser, James Winton, Arbroath.
Fyfe, Thomas Henderson, Aberdeen.
Henry, George, M.A., Aberdeen.
Holden, Joseph Eatough, Bolton, Lancashire.
Kelman, George Alexander, Fearn, Ross-shire.
Macdonald, George Bothwell Douglas, Aberdeen.
Manning, Leslie Samuel, Christchurch, New Zealand.
Melvin, James, Aberdeen.
Myles, John Coutts, Aberdeen.
Nicol, Patrick John Smith, Aberdeen.
Pearson, Joseph, Sheffield.
Pirie, James, M.A., Elgin.
Rannie, Robert, Glenbucket.
†Shand, Jonathan, Keith.
Smith, Robert, Aberdeen.
Souter, Charles Henry Joseph, Emmaville, New South Wales.
Souter, John, M.A., Aberdeen.
†Thomson, Thomas Harvey, Stonehaven.
Urquhart, Charles Thiselton Dyer, Aberdeen.
Walker, Frederick William, Darlington.
Webster, James, Aberdeen.
White, Cresswell Fitzherbert, Chippenham, Wilts.
Wilson, George Nicol.

* Highest Academical Honours. † Honourable Distinction.

At the same time the following gentleman was certified to have passed all the examinations, and that he should receive his degrees in Medicine and Surgery with "Honourable Distinction," but did not graduate:—

Ker, George William England.

UNIVERSITY OF GLASGOW.—The following gentlemen have passed the Third Professional Examination for the degrees of M.B. and C.M.:—

Banks, Robert.
Bannatyne, Gilbert A.
Blackburn, Thomas L.
Blair, Alexander.
Bland, Matthew H.
Buchanan, Robert M.
Charles, John.
Copland, Andrew.
Cowen, Herbert O.
Gemmell, William.
Gillespie, J. Paterson.
Jago, Arthur H.
M'Conville, John S., M.A.
M'Glashan, James.
Melville, John.
Monro, Thomas K., M.A.
Niven, Charles R.
Norris, Frederick L.
Paton, William R.
Pinkerton, Robert L., M.A.
Rankin, John S.
Robb, William.
Sandilands, John, M.A.
Wallace, James.
Wilson, James P.
Wylie, Richard J.
Young, James.

The following have also passed in Pathology:—

Boyle, Michael A.
Cameron, Thomas.
Campbell, Archibald.
Curle, David.
Gunn, Archibald.
Hallett, Charles H.
Hamilton, Wm. Cowan.
Harrison, Edward O.
Hay, Thomas Wm.
Innes, Andrew.
Jenkins, Thomas W., M.A.
Kirkland, Hugh.
Laird, Thomas.
Lang, Ebenezer.
M'Kendrick, John.
Sloan, Hugh R.
Wildridge, Charles M.

ST. ANDREWS UNIVERSITY.—The following degrees were conferred on April 20th:—

DEGREE OF M.D.

Charlesworth, Samuel, Hirst, Bradford, Yorks.
Greaves, Charles Henry, Stafford.
Hackney, John, Hythe.
Havard, David, Newport, Pembroke.
Jackson, Jabez Bunting, Birmingham.
Le Page, John Fisher, Salford.
Lyall, Andrew, Leven.
Mac Bain, Hugh Gilles, North Berwick.
Mitchell, Joseph, New Wortley.
Stone, Valentine, Montrose.

DEGREE OF M.B.

Fayrer, Joseph, M.A., Edinburgh.

SOCIETY OF APOTHECARIES.—The following gentlemen, having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society on April 14th:—

Bishop, Charles Rosser, M.R.C.S., Craven-hill, Hyde-park.
Dickinson, John Clough Hardman, Bow-road.
Hinnell, Joseph Squier, Garland-street, Bury St. Edmunds.
St. Johnston, Charles, Easy-row, Birmingham.
Roe, H. Havilland, M.R.C.S., Woburn-place, Russell-square.
Tonks, H., M.R.C.S., Packwood, Grange, Knowle, Warwickshire.

GUY'S HOSPITAL FUND.—A sermon will be preached in the church of St. Saviour, Southwark, on Tuesday evening, April 26th, by the Lord Bishop of Liverpool, on behalf of the fund of £100,000 which is being raised for the above hospital.

THE annual meeting of the governors of the Carmarthenshire Infirmary was held on the 12th inst., when satisfactory reports were presented and adopted.

A SUPERANNUATION grant of £67 per annum has been made to Mr. Thomas Gray, late medical officer to the Poplar Board of Guardians.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—Sir A. K. Rollit, M.P., LL.D., will, we are informed, preside at the festival of this Society, to be held at the Grand Hotel, Charing-cross, on Wednesday, June 22nd.

VACCINATION GRANT. — Mr. J. B. Muirhead, M.B., Malling Union, has received the Government grant for efficient vaccination in the second district of the above union (first time).

FIRST AID.—At the distribution of certificates to the pupils of the first aid classes at Norton St. Philip, near Bath, the members of the classes presented the lecturer, Mr. W. Godfrey Evans of Beckington, with a very handsome carriage clock.

GUY'S HOSPITAL.—The Michael Harris Prize in Anatomy of £10 has been awarded to Mr. Frederick William Hall, of Sydney, New South Wales; and the Beaney Prize in Pathology of 30 guineas has been awarded to Mr. Theodore Fisher of Greenwich.

GLASGOW EAR HOSPITAL.—At the annual meeting of patrons and subscribers of this hospital, held on the 13th inst., Dr. James Erskine, recently assistant-surgeon to the hospital, was elected a member of the board of directors of that institution.

THE sanatorium which has been erected at Bradwell jointly by the Wolstanton and Burslem Rural Sanitary Authority, the Wolstanton and Burslem Guardians, the Burslem Corporation, and the Tunstall Local Board, was opened on the 6th inst.

DURHAM COLLEGE OF MEDICINE.—A deputation from this College is, we learn, about to wait on the Lord President of the Council with the object of obtaining a Government grant towards the building fund of the institution.

FATAL FOOTBALL ACCIDENT.—At an inquest held at Macclesfield on the 14th inst., the jury returned a verdict of accidental death in the case of a football player who died from the effects of a kick in the stomach during a match for the benefit of another player, who had his leg broken.

PROPOSED HOSPITAL AT MONTREAL.—Sir George Stephen, president of the Canadian Pacific Railway, and Sir Donald Smith, one of the directors, have, it is announced, addressed a letter to the mayor of the city offering to contribute a million dollars for a hospital for the city poor, to be named the Royal Victoria Hospital, and to be erected on a site which they hope the city authorities will grant on the slope of Mount Royal.

LEDWICH SCHOOL OF MEDICINE, DUBLIN.—At the termination of the winter session the following prizes were awarded:—Junior Anatomy: Henry Cullman, 1st; J. C. Ryan, 2nd. Senior Anatomy: D. Shanahan, 1st; J. P. O'Meara, 2nd. Surgery: W. J. Thompson, 1st; D. L. Hamilton, 2nd. Practice of Medicine: J. D. Sexton, 1st; P. Rowan, 2nd. Physiology: J. R. Steen, 1st; J. B. Wilkinson, 2nd. Midwifery: D. L. Hamilton. Theoretical Chemistry: C. M. O'Brien.

MIDLAND VOLUNTEERS' MEDICAL ASSOCIATION.—The second annual meeting of the members of this Association was held on the 13th inst. at Birmingham, under the presidency of Surgeon-Major Thompson. It was reported that the work of the year had been extremely satisfactory, but that the medical staff connected with the Volunteers at the present time would be altogether inadequate in case of active service. This is due to the action of the War Office, which declines almost entirely to support or assist them. The Association has also been successful financially, a small balance remaining in the treasurer's hands after payment of all the expenses of the preceding year.

NEW MORTUARY FOR HACKNEY.—On the 6th inst. the Hackney District Board of Works, after a long discussion, decided to purchase a piece of ground and erect a mortuary, post-mortem room, and a room for the reception of the bodies of persons who have died from infectious diseases, at an estimated cost of £1250. This step was taken in consequence of the many complaints which have been received of the great want of accommodation in this respect.

ASYLUM ACCOMMODATION IN PORTUGAL. — In an account of the work done in Count Ferreira's hospital, or rather lunatic asylum, in Oporto, by the director, Dr. A. M. de Senna, a distinguished Portuguese alienist, which has just been published, the author complains bitterly of the great lack of asylum accommodation in Portugal, saying, "Portugal does not succeed in finding room in asylums for a seventh part of her mentally afflicted population, while in England nine-tenths of such persons are provided for."

SEMI-CONVALESCENT HOME AT COOKRIDGE.—By the munificence of Mr. John North of Leeds, a semi-convalescent home is about to be erected at Cookridge as an adjunct of the Leeds Infirmary. Building operations have been commenced, and it is expected that the establishment will be ready for occupation about the beginning of 1888. Room will be provided for forty-two beds at first, with additional accommodation if required. The estimated cost, exclusive of furnishing, is £5000, and this sum has been already advanced by Mr. North.

THE NATIONAL HOSPITAL FOR CONSUMPTION AT VENTNOR.—The festival dinner in aid of the funds of this institution was held on Tuesday, the 19th. The Duke of Cambridge, who presided, pointed out the advantages of such a hospital in cases of diseases of the chest, and mentioned that since its foundation in 1868 it had helped 7384 patients. There are now 118 beds, and later in the year this number will be increased by 20 more. An earnest appeal was made for funds, and during the evening a list of donations and subscriptions was read, the total amounting to about £2400.

BUTTER ADULTERATION IN KENT.—The analyst for the county of Kent has submitted a report to the Finance Committee of the Court of General Sessions on the subject of the adulteration of butter, in which he says that during the past quarter thirty-two samples were examined, and seven found to be adulterated with foreign fat, with a range of from 20 to 92 per cent., giving a mean rate of 54·25 per cent. of adulteration. This falsification of butter by the admixture of foreign fat, and not, as was formerly the case, by complete substitution, is a fraud much more difficult of detection by the analyst, and quite impossible to the ordinary public.

ANOTHER THAMES VALLEY DRAINAGE BOARD.—On the 13th inst. a Local Government Board inquiry was held with reference to an application by the Richmond Urban Sanitary Authority and the Richmond Rural Sanitary Authority for a Provisional Order to form their two districts into a united district, under Section 279 of the Public Health Act, for sewerage purposes; such Provisional Order to provide for the constitution of a joint board to act as the governing body of the united districts. The parishes affected include Richmond, Mortlake, Barnes, Kew, and Petersham, and the new board will have powers similar to those which were exercised for some years by the now defunct Lower Thames Valley Main Sewerage Board. There is no opposition to the application.

HUNTINGDON COUNTY HOSPITAL.—At a meeting of the governors of this charity held on Tuesday last, the Earl of Sandwich presiding, the Duke of Bedford, Lord-Lieutenant of the County, and the Bishop of Ely, were elected patrons of the institution. The Duke of Bedford has intimated his intention of giving £100 to the funds of the hospital. A vote of condolence with the family of the late Mr. Philip Tillard, chairman of Quarter Sessions, was also passed. Mr. Tillard had been honorary secretary of the hospital for nineteen years, from its establishment in 1833. It will be remembered that the hospital adjoins the Great Northern Railway at Huntingdon, and was of great public service at the time of the terrible collision at Abbots Ripton some years ago.

RABIES AMONGST DEER AT RICHMOND.—At the Richmond Petty Sessions on the 20th inst. an outbreak of rabies among the deer in Richmond-park was reported. About one hundred of the animals have been affected, and consequently destroyed. Every precaution is being takan to prevent the spread of the epidemic, the herd which has been attacked having been completely isolated.

MEDICAL NOTES IN PARLIAMENT.

The Vaccination Acts.

In the House of Commons on the 14th inst., in reply to Mr. Channing, Mr. Ritchie stated that he could not undertake to intervene in any individual case of repeated prosecution for non-compliance with the Vaccination Acts, nor was he prepared to propose legislation which would take away from the guardians, who have the advantage of knowing fully the local circumstances, their freedom of action in the matter.

Army Medical Officers.

In answer to Dr. Tanner, Mr. E. Stanhope stated that army medical officers, as he had already several times explained, will be exactly in the same position as they have hitherto been.

The Sanitary Condition of Barracks.

On the 18th inst., Mr. Norris asked the Secretary of State for War whether any further information had reached him as to the sanitary condition of the barracks at Dover contradictory of the statement contained in the report of the principal medical officer there and the Commanding Officer of Royal Engineers, quoted by him on Feb. 8th last, "that they had failed to discover any insanitary conditions;" whether the death of another young officer, Mr. Keegan, and the illness of a private soldier were attributable to typhoid fever contracted in the barracks; and, if so, whether he would cause immediate and searching inquiry to be made into all the facts of those cases, which followed so closely on the death of Lieutenant Jarrett, of the Buffs, from the same disease; and if he would state whether complaints had reached him as to the insanitary condition of other barracks.—Mr. E. Stanhope replied that according to a report received that morning careful investigation has failed to discover in Fort Burgoyne, where these cases of enteric fever occurred, any insanitary conditions which will account for the disease; but a further minute inspection is to be made and steps taken to remove immediately every possible source of disease to which any suspicion can attach. In answer to the third question, he stated that complaints had been received from other barracks also, and the Government would in every case, if the complaint appears to be well-founded, remedy it with the least possible delay.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BIRCH, ROBERT, M.R.C.S., L.R.C.P.Lond., has been appointed Medical Officer for the Workhouse of the Newbury Union.

BROWN, F. L. HARMAN, M.B., C.M.Edin., has been appointed Second Assistant Medical Officer to the Norfolk County Asylum.

CLARK, MALCOLM R, L.F.P.S.Glas., L.R.C.P.Ed., has been appointed Medical Officer for the Harthill District of the Worksop Union.

COLT, THOMAS A., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Portsea District of the Portsea Island Union.

DAVIDSON, JOHN, M.B., C.M.Ed., has been appointed Medical Officer for the South Wallasey District of the Birkenhead Union.

GALLOWAY, ARTHUR W., L.R.C.P.Lond., M.R.C.S., has been appointed a District Surgeon to the City of London Lying-in Hospital, vice Thomas, resigned.

HART, WALTER, M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Fourth District of the Chelmsford Union.

HAYDEN, WILLIAM G., M.R.C.S., L.R.C.P.Lond., has been appointed Medical Officer for the Third District of the Royston Union.

HOPE, E. W., M.D.Ed., has been appointed Visiting Medical Officer to the City Hospital, Park-hill, Liverpool.

JESSOP, WALTER H., M.B., F.R.C.S., has been appointed Surgeon to the Central London Ophthalmic Hospital, vice W. Charnley, M.D., resigned.

JONES, JOHN O., L.R.C.P., C.M.Ed., has been appointed Medical Officer for the Llanfair talhaiarn District of the St. Asaph Union.

LITTLE, W. MAXWELL, M.B., C.M.Edin., late Second Assistant Medical Officer, North County Asylum, has been appointed Senior Assistant Medical Officer, vice T. J. Compton, M.B., C.M., resigned.

LLOYD, K. M., M.R.C.S., has been re-elected Medical Officer of Health by the Holywell Local Board.

MACINDOE, ALEXANDER, M.D.Glas., has been appointed Medical Officer for the Alderley and Gawsworth District of the Macclesfield Union.

MARTIN, SIDNEY, M.D.Lond., B.Sc., M.R.C.P., has been appointed Pathologist to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

MCDONALD, B. F. P., M.D.Ed., has been appointed Medical Officer for the North Wallasey District of the Birkenhead Union.

MICKLE, JULIUS, M.D.Lond., M.R.C.P., has been appointed Lecturer on Psychological Medicine at the Middlesex Hospital Medical School, vice Case, resigned.

SOUTHERN, JOHN ACTON, L.R.C.P.Lond., has been appointed House-Surgeon to the Derbyshire General Infirmary, vice E. C. Green, M.R.C.S., L.R.C.P.Lond., resigned.

WOODHEAD, GERMAN SIMS, M.D., F.R.C.P.Ed., F.R.S.Ed., has been appointed Superintendent of the new Laboratory, Royal College of Physicians, Edinburgh.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL ROYAL INFIRMARY.—Assistant Resident Medical Officer and Pathologist. Salary £80 per annum, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon. Rooms, gas, and firing.—Assistant Surgeon.

CHELTENHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Salary £40 per annum, with board and apartments.

COUNTY AND BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. Salary £100 per annum, with board, lodging, fire, light, and washing.

COUNTY ASYLUM, Stafford.—Resident Medical Officer and Superintendent. Salary £500 per annum, with unfurnished residence within the Asylum, and £200 in lieu of board.

DENTAL HOSPITAL OF LONDON, Leicester-square, W.C.—Assistant Dental Surgeon.

DORSET COUNTY ASYLUM, near Dorchester.—Assistant Medical Officer. Salary £120 per annum, with board &c.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—House-Surgeon. Salary £70 per annum, with board, washing, and residence.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, Bartlett's-buildings, Holborn, E.C.—Honorary Physician.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTER EYE INSTITUTION.—House-Surgeon. Salary £100 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road, N.—House-Physician.

HORTON INFIRMARY, Banbury.—House-Surgeon and Dispenser. Salary £80, with board and lodging.

MASON SCIENCE COLLEGE, Birmingham.—Professor of Physiology.

METROPOLITAN FREE HOSPITAL, Kingsland-road, E.—Assistant House-Surgeon.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House-Surgeon. Salary £80 per annum, apartments and rations (exclusive of wines, spirits, and washing).

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Brighton.—House-Surgeon. Salary £80 per annum, with board, lodging, and washing (no stimulants).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Anatomy for the Second Professional Examination of the Conjoint Board. Examiner in Anatomy for the Fellowship.

ROYAL LONDON OPHTHALMIC HOSPITAL.—Clinical Assistants. Junior Assistants for the Out-patient Department.

SEAMEN'S HOSPITAL SOCIETY (late Dreadnought), Greenwich.—Secretary.

STANHOPE-STREET PUBLIC DISPENSARY, Clare-market, W.C.—Resident Medical Officer. Salary £105 per annum, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

CARPENTER.—On the 12th inst., at Trevathan, Albemarle-road, Beckenham, Kent, the wife of E. Carpenter, M.R.C.S., of a son.

CHILLINGWORTH.—On the 14th inst., at Tavistock-street, Bedford, the wife of Andrew Chillingworth, M.R.C.S., of a son.

FORBES.—On the 16th inst., at Stokesley, Yorkshire, the wife of W. G. Forbes, M.B., C.M.Ed., of a daughter.

MARTIN.—On the 13th inst., at The Limes, Walkden, the wife of William Young Martin, M.D.Univ.Dur., F.R.C.S., of a son.

NICHOLAS.—On the 15th inst., at Darloe Cottage, West Looe, Cornwall, the wife of Surgeon Nicholas, M.S., of a daughter.

MARRIAGES.

LEWIS—LEWIS.—On the 14th inst., at the Congregational Church, Ealing, by the Rev. G. P. Gould, M.A., cousin of the bride, T. Preston Lewis, M.D., of Brixton, to Lucy, daughter of the Rev. C. B. Lewis, of Grange-park, Ealing, late of Calcutta.

MYDDELTON GAVEY—CATT.—On the 14th inst., at the Parish Church, Lindfield, by the Rev. F. Willett, M.A., assisted by the Rev. R. Wyatt, Vicar of Haywards-heath, Edward Herbert Myddelton-Gavey, M.R.C.S.Eng., of Ipswich, to Frances Caroline Catt, daughter of the late Charles Catt, of Summer-hill, Lindfield, Sussex.

OWEN—HALL.—On the 13th inst., Rayley Owen, of 14, Devonshire-terrace, Hyde-park, son of William B. Owen, of 61, Cleveland-square, to Elizabeth, eldest daughter of the late Walter Hall, of 12, Holland-park, W.

DEATHS.

FRANKS.—On the 17th inst., at Darwin House, The Common, Sevenoaks, George Franks, F.R.C.S., in his 89th year.

KIRKMAN.—On the 3rd inst., at St. George's-place, Brighton, John Kirkman, M.D., for forty-five years, from 1831, Superintendent of the Suffolk County Asylum for the Insane, aged 92.

MEADOWS.—On the 19th inst., at George-street, Hanover-square, Alfred Meadows, M.D., J.P., in his 54th year.

VACHER.—On the 15th inst., at 31, Shrewsbury-road, Birkenhead, Isabella, wife of Francis Vacher, F.R.C.S.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, April 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

RESEARCH SCHOLARSHIPS OF THE GROCERS' COMPANY.—5 P.M. Mr. W. North: Malarial Fevers.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bruce Clarke: A peculiar Congenital Papilloma of the Thigh.—Mr. William Rose: A case of Severe Injury to the Wrist-joint requiring Suture of Nerves and Tendons.—Mr. F. B. Jessett: (1) A case of Plastic Operation on the Nose; (2) A case of Removal of a Large Cystic Growth from the Neck Implicating the Submaxillary Gland.—Mr. Bernard Pitts: A case of Congenital Curvature of the Spine.—Mr. Marmaduke Sheild: Case of Tumour of the Neck greatly reduced in size by Arsenic.

Tuesday, April 26.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 1.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. W. E. Ayrton: Electricity.

SOCIETY OF ARTS.—8 P.M. Mr. J. Hungerford Pollen: Ornamental Glass.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Warner and Dr. Fletcher Beach: A case of Chronic Meningitis, probably Syphilitic, and causing Progressive Dementia.—Dr. Poore: An Analysis of Ninety-three cases of Writers' Cramp and Impaired Writing Power, making, with seventy-five cases previously reported, a total of 168 cases.—Dr. Haig: The Relation of a certain form of Headache to the Excretion of Uric Acid.

Wednesday, April 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

SOCIETY OF ARTS.—8 P.M. Mr. Arthur W. C. Shean: Appliances for Saving Life from Fire.

HUNTERIAN SOCIETY.—8 P.M. Dr. A. J. Davies: Cases of Myxœdema.—Dr. Dundas Grant: A case of Carcinoma of the Œsophagus perforating the Trachea.—Dr. Port: (1) Two cases of Pseudo-hypertrophic Paralysis; (2) On Antipyrin.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be shown by Drs. Edis, Fancourt Barnes, G. Granville Bantock, Mr. Lawson Tait, and others. Council at 8 P.M.

Thursday, April 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The Chemistry of the Organic World.

RESEARCH SCHOLARSHIPS OF THE GROCERS' COMPANY.—5 P.M. Mr. W. North: Malarial Fevers.

Friday, April 29.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

SOCIETY OF ARTS.—8 P.M. Mr. J. F. Hewitt: Village Communities in India.

ROYAL INSTITUTION.—9 P.M. Prof. H. S. Hele Shaw: The Rolling Contact of Bodies.

Saturday, April 30.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. R. Von Lendenfeld: The Australian Alps and the Origin of the Australian Fauna.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office, April 21st, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 15	30·45	N.W.	39	35	82	52	34	...	Overcast
,, 16	30·56	E.	44	39	97	52	39	...	Cloudy
,, 17	30·79	N.E.	43	38	62	52	33	...	Overcast
,, 18	30·55	N.W.	42	39	90	64	34	...	Hazy
,, 19	30·33	N.W.	52	45	99	67	41	...	Hazy
,, 20	30·18	N.W.	50	45	102	65	42	...	Hazy
,, 21	29·96	W.	47	44	90	58	41	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

DR. BRUNTON AND HOMŒOPATHY.

Dr. Dudgeon is not satisfied that Dr. Brunton will not confess more obligation to homœopathy than he does, and sends us another letter in the same strain as one we lately published. He must excuse us saying that we cannot continue the discussion. We think Dr. Brunton's estimate of homœopathy sound in point of sense and scientific. We think that Dr. Brunton's Therapeutical Index will be the better for even more expurgation than it has received. This will probably make it less trying to homœopaths and more useful to general practitioners; but this is not of the essence of the question of homœopathy or of Dr. Brunton's opinion of it.

Mr. W. Robinson.—Our correspondent is probably referring to cases of nebula of the cornea, which were at one time treated with prussic acid. Cataract was never cured by this means.

Constant Reader.—1. Lauder Brunton's Pharmacology, Therapeutics, and Materia Medica, or Beasley's Formulary, contain the directions desired.—2. Sp. vini rect.

MEDICAL OFFICERS OF HEALTH AND PRISON SURGEONS.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me whether the medical officer of health of a town is justified in visiting H.M. prison and union workhouse with a view to ascertaining their sanitary condition and reporting upon the health of the inmates without requesting the co-operation or sanction of the medical officer of those institutions, or in any way communicating with him?

I am, Sirs, yours truly,

M. O. H.

*** The Public Health Act apparently contemplates that a medical officer of health shall inform himself of the sanitary circumstances of all portions of his district, including the institutions within it. But where an institution has a medical officer who is responsible for its control and management, the necessary information can usually be obtained from this officer, and it is, as a rule, unnecessary for the medical officer to intervene. Where such intervention becomes necessary, under any special circumstances, it should always be effected in co-operation with the officer of the institution. In the case of prisons, which are under the control of a Government department having a medical staff of their own, and to which access by any but prison officials may properly be denied, it can rarely be requisite for an officer of health to claim a right of entry; and if such entry should be necessary in connexion with the work of his district, it should certainly be secured with the co-operation of the prison medical officer.—ED. L.

AN INTERESTING CONSIGNMENT.

DR. MACALISTER, F.R.S., the Professor of Anatomy in the University of Cambridge, has, it is stated, just received a case of skulls from Egypt representing different types of people at different periods of the history of that country. By examination and comparison he hopes to arrive at sound conclusions as to the races to which the owners of these skulls belonged.

Perplexed.—We quite agree with our correspondent that his patient would be acting unwisely in adopting the course suggested.

X.—Our correspondent will see that the question upon which he writes has been solved in a satisfactory manner.

A Country Doctor is referred to THE LANCET of last week, page 795.

THE LATE DR. HUTTON.

To the Editors of THE LANCET.

SIRS,—The help of the benevolent is solicited on behalf of the family of Dr. Hutton, late of 26, Lowndes-street, whose death was recently noticed in your columns. Dr. Hutton's course, though one of industry, self-denial, and probity, was not rewarded by pecuniary success. Some of his excellent qualities were not such as lead to worldly prosperity, and even in some respects militate against it. He began life with a small patrimony; but this was sacrificed in the interest of a near relative, without any fault on Dr. Hutton's part, excepting that he was too trustful and too unselfish. Upon this part of the sad story it is not needful to dwell. Dr. Hutton's practice, once considerable, of late years diminished until the daily earnings scarcely provided the daily needs, though these were made matters of the most rigid economy. When the end came there was found to be nothing, or, rather, something less than this. There is a son who holds a commission in the army, which it is trusted he may not have to give up. He is thus provided for; but his pay does not suffice to maintain his relatives. The widow and two unmarried daughters are left with no means of support. The widow, who is advanced in years and is the subject of a painful disease, has a double claim on the profession, since she is the daughter of the late Dr. Seymour, once well known as physician to St. George's Hospital. It is hoped that some who have been less unfortunate than Dr. Hutton, or more successful, will give out of their abundance towards a fund which is being raised for the purpose of saving these ladies from absolute want. How it can best be used will depend on the amount; it shall be guarded carefully, and employed judiciously. Some of the leaders of the profession, as well as some of Dr. Hutton's attached friends, have already subscribed liberally. It is hoped that this appeal to a wider circle may be also responded to. The gentlemen whose names follow have agreed to form a committee for the collection and management of the fund:—L. Cumberbatch, M.D., W. H. Dickinson, M.D., Sir Joseph Fayrer, Geo. Faudell Phillips, Esq., G. D. Pollock, Esq., R. Stewart, Esq., W. Wadham, M.D. Dr. Cumberbatch, 25, Cadogan-place, Belgrave-square, S.W., as treasurer, will be glad to receive and acknowledge subscriptions. Cheques should be made payable to him. The following sums have already been subscribed:—

Sir Prescott Hewett	...	£52	10	0	Sir Benjamin Phillips	...	£5	5	0
Geo. Faudell Phillips, Esq.		50	0	0	S. H. Phillips, Esq.	...	5	5	0
General Seymour	...	50	0	0	W. O. Priestley, M.D.	...	5	5	0
R. Stewart, Esq.	...	31	10	0	W. Wadham, M.D.	...	5	5	0
Sir W. Jenner	...	21	0	0	Sir Joseph Fayrer	...	5	0	0
Sir Andrew Clark	...	21	0	0	Lady Fayrer	...	5	0	0
James Wyllie, Esq.	...	21	0	0	Miss Dickinson	...	5	0	0
J. D. Allcroft, Esq.	...	20	0	0	H. Lee, Esq.	...	5	0	0
L. Cumberbatch, M.D.	...	20	0	0	F. Bagshawe, M.D.	...	3	3	0
Mrs. Cæsar Hawkins	...	10	10	0	J. W. Ogle, M.D.	...	3	3	0
W. H. Dickinson, M.D.	...	10	10	0	Charles Hawkins, Esq.	...	2	2	0
Sir William Gull	...	10	0	0	T. Holmes, Esq.	...	2	2	0
Baroness H. de Worms	...	10	0	0	J. Rouse, Esq.	...	2	2	0
Geo. D. Pollock, Esq.	...	10	0	0	J. Mould, Esq.	...	2	2	0
G. B. Brodie, M.D.	...	10	0	0	J. Cavafy, M.D.	...	1	1	0
J. H. Mudie, Esq.	...	10	0	0	T. P. Pick, Esq.	...	1	1	0
Mrs. Hugh Kennard	...	10	0	0	Clinton Dent, Esq.	...	1	1	0
J. H. Levy, Esq.	...	10	0	0					

I am, Sirs, your obedient servant,
W. HOWSHIP DICKINSON,
April, 1887. Secretary of the Committee.

A Constant Reader.—We have not heard that such an intention has been expressed by any of the various licensing bodies.

Mr. Johnson (Liverpool).—We regret to be unable to assist our correspondent.

"BREAD-MAKING."

To the Editors of THE LANCET.

SIRS,—In answer to the letters of Mr. Robert Jones and "H.," permit me to say that a pamphlet was published about the year 1850 on the subject by a "Dr. Dagleish," or "Dalgleish."—Yours truly,
April, 1887. NO-NATION.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Can any of your correspondents inform me how to prepare the metal, or amalgam rather, used in making children's tin (so-called) toys and capsules for bottles, together with the names of manufacturers of the latter. I require the amalgam for health purposes.

I am, Sirs, yours truly,
April, 1887. J. W.

"SHAM PATIENTS."

ANOTHER correspondent, Mr. R. J. Hutton, of Stapleton Hall-road, N., writes to say that his consulting-room has also received an unwelcome visit from probably the same scoundrel who relieved Drs. Longhurst and Low of valuable property. In the case of Mr. Hutton, the thief managed by picking a lock to decamp with seven sovereigns as plunder.

Miss Keightley.—We do not issue reprints of separate articles which have appeared in THE LANCET.

A. G. P. will see that we allude to the question in an answer to another correspondent.

SUDDEN DEATH.

To the Editors of THE LANCET.

SIRS,—"I fear you are too late," said the husband, as he hurried me to the apartment where his wife, from sudden failure of the heart's action, was lying insensible, and, as the nurse informed me, "dying." It was impossible to administer by the mouth a restorative, so without delay I injected hypodermically twenty drops of ether, sp. gr. 0·720, and, as the improvement was not as quick as I desired, forthwith twenty drops more. To the complete astonishment and great delight of the friends, consciousness and strength rapidly returned.

The sudden deaths which have so lately thrilled the public mind, more especially the death of Lord Iddesleigh in London and Mr. Christopher Bushell here, have influenced me to send you the above record, not as the proclamation of a new discovery, but as a suggestion—a suggestion in connexion with the alarming newspaper reports, which usually run somewhat thus:—"Mr. —— suddenly became ill, when, sinking, he was supported by his friend. Dr. ——, who happened to be present, was most assiduous in his attention, but at last pronounced life extinct." Should it not be impressed on the public that the easiest mode in which respiration can be carried on is when the body is extended at full length—not lying on the back, but with the inclination towards the prone position? Nature throws down to assist the encumbered circulation; the officious kindness of indiscretion and ignorance supports the fainting sufferer. Again, would it not be well in these times of frequent sudden deaths from weakened hearts that each medical man should have in his possession, ready for immediate use, his hypodermic syringe case, with its little bottle filled with ether? Would it not be well, too, that the possessor of a weak heart, or, better still, the friend who accompanies him, should also have the ether and syringe ready for instant employment. Ladies with neuralgia practise hypodermic injections of morphia by the advice and under the direction of physicians. This I would condemn. But the friend of a valuable life, the tenure of whose leasehold is uncertain through the possession of a weakened, or flabby, or a fatty heart, might well be instructed in the use of the subcutaneous injection of ether. More than one example might be adduced to show that the immediate stimulant might rouse the flagging pulse-throb; and then, instead of the announcement that "life was extinct," one might read that after the injection the appalling symptoms quickly passed away, and what appeared to be approaching death gave place to the renewed energy of life, with all its usefulness.

I am, Sirs, yours faithfully,
Liverpool, Feb. 23rd, 1887. W. H. LAMBART, M.D.

FLEXIBLE STETHOSCOPES.

To the Editors of THE LANCET.

SIRS,—In reference to the rubber stethoscope mentioned in your last issue as a new invention, permit us to say that many years ago we constructed the same indiarubber stethoscope from a design furnished us by Dr. B. W. Richardson; that it is fully described, with its advantages, in the *Æsclepiad*, vol. i., page 162-3, 1884; and that we have supplied the profession with it repeatedly, the instrument being much appreciated. The advantage you refer to, that it does not injure the instrument to sit upon it, is noticed in the paper above referred to. Dr. Richardson, we believe, does not use any other stethoscope.

We are, Sirs, yours respectfully,
Duke-street, April 18th, 1887. KROHNE AND SESEMANN.

BROWN DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Would you kindly allow me to acknowledge the receipt of the following contributions to the above fund?

Thomas Smith, Esq.				Dr. Frazer	...	...	£1 1 0
F.R.C.S.	...	...	£3 3 0	Dr. Grey Glover	...	...	1 1 0
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Benj. Duke, Esq.	...		1 1 0	J. T. Boyd, Esq.	...	...	0 10 6

I am, Sirs, yours faithfully,
Meadow Side, 23, Upper Richmond-road, G. STANLEY MURRAY.
Putney, April 20th, 1887.

THE ASSOCIATION OF GENERAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—I hope the above powerful advocate of the rights of the masses will favour us here in Ireland with a meeting next August, on the occasion of the British Association gathering in Dublin. Irish provincials need stirring up, and a little Saxon backbone will do them no harm.

I am, Sirs, yours truly,
Cashel, April 16th, 1887. THOMAS LAFFAN.

LANGMORE DEFENCE FUND.

IN response to the appeal which recently appeared in THE LANCET several donations have been forwarded; but a sum of £122 is still required to pay the legal expenses necessarily incurred by Dr. J. Wreford Langmore for his defence in the recent trial, although he obtained the verdict of the jury with full costs. Subscriptions should be sent to Mr. George Bastes, M.B., 69, Connaught-street, Hyde Park-square, London, W.

Second List of Subscribers.

Subscriptions announced	£84	16	6	Mr. Malcolm A. Morris...	£1	1	0
"A Friend"	5	5	0	Mr. W. B. Owen	1	1	0
Mr. Thomas Smith ...	3	3	0	Mr. Herbert Page ...	1	1	0
Sir Henry Thompson ...	2	2	0	Mr. F. N. Padley... ...	1	1	0
Dr. W. H. Broadbent ...	2	2	0	Dr. G. V. Poore	1	1	0
Dr. J. Hughlings Jackson	2	2	0	Mr. Henry Power ...	1	1	0
Mr. G. P. Field	2	2	0	Dr. C. Taylor	1	1	0
Mr. Marcus Beck... ...	1	1	0	Mr. A. S. Underwood ...	1	1	0
Dr. Walter J. Bryant ...	1	1	0	Mr. R. H. Woodhouse ...	1	1	0
"H. V. C."	1	1	0	Mr. F. Canton	0	10	6
Surgeon-General W. R. Cornish	1	1	0	"W. D."	0	10	6
Mr. Henry Gaselee ...	1	1	0	Dr. J. Breward Neal ...	0	10	6
				Mr. Walter Rigden ...	0	10	6

Mr. G. E. Walker.—We know of no institution where the suggestion is acted upon; but it appears worthy of consideration.

M.R.C.S. is referred to an article on the subject which appeared in THE LANCET of Nov. 20th last.

Mr. B. B. Joll will find his question answered in our current issue.

R. N.—Once or twice daily.

ABDOMINAL PALPATION.

To the Editors of THE LANCET.

SIRS,—I am informed that in one of the numbers of your journal the statement was made that the method of abdominal palpation was not taught in any of the medical colleges. I take pleasure in mailing to you to-day one of the announcements of the Long Island College Hospital, by which you will see that, whatever may be true of other colleges, this one recognises the value of this means of diagnosis. I may also add that this plan has been carried out with us for two years past.

I am, Sirs, yours very truly,

J. H. RAYMOND, Secretary.

Long Island College Hospital, Brooklyn, N.Y., April 7th, 1887.

Dr. C. E. Monro (Penge).—If the notice arrived, and we have no recollection of it, it has been mislaid.

Dr. Glanville.—The formula was given in our issue of March 26th.

Dr. J. Hardie's letter is crowded out this week.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Dyce Duckworth, London; Dr. Brixton Hicks, London; Dr. Dickinson, London; Mr. Harrison Cripps, London; Herr Fischer, Jena; Mr. C. Higgens, London; Mr. J. W. Watson, York; Mr. Walter Whitehead, Manchester; Dr. Adams, Runcorn; Dr. Forbes Winslow; Mr. Stanley Murray, Putney; Mr. Batterham, St. Leonards; Dr. C. E. Monro, Penge; Mr. Branthwaite, Willesden; Mr. Faulkner, London; Mr. Tallack, London; Mr. H. S. Jackson, Walmer; Mr. Wickham Barnes, London; Mr. H. Bramwell, Newcastle-on-Tyne; Dr. Julius Mickle, London; Mr. J. H. Raymond, Brooklyn; Messrs. Bryce and Whitelegge, Nottingham; Dr. J. Beckett, London; Messrs. Lynch and Co., London; Mr. C. H. Wells, London; Messrs. Kegan Paul and Co., London; Dr. Sawtell, London; Messrs. Maclure, Macdonald, and Co., Glasgow; Mr. J. B. Pike, Loughborough; Messrs. Loeflund and Co., London; Mr. K. Tomson, Luton; Mr. W. E. Sacker; Mr. Barton Smith, London; Mr. R. J. Hutton, London; Messrs. Todd, Burns, and Co., Dublin; Dr. Rentoul, Liverpool; Mr. W. G. Evans; Mr. Kenneth Millican, London; Mr. E. C. Andrews, London; Messrs. Burroughs and Wellcome, London; Mr. G. Banks, London; Messrs. Condy and Co., London; Mr. Lysaght, Sydney; Mr. T. Laffan, Cashel; Mr. W. Greene, Wallingford; Mr. F. C. Turner, London; Mr. G. P. Best, Cheltenham; Mr. Kingzett, London; Mr. Blanch; Messrs. Peebles and Son, London; Mr. Haslam, Birmingham; Dr. M'Kendrick, Glasgow; Dr. McKee, Wiesbaden; Mr. Beck, London; Mr. M. H. Taylor, Richmond; Mr. J. Gilroy, Birmingham; Dr. G. D. Douglas, Bournemouth; Mr. Mosely, Leeds; Dr. Railton, Manchester; Dr. Dudgeon, London; Mr. Cornish, Manchester; Mr. Mayo, London; Mr. Thomas, Birmingham; Mr. Jeaffreson, Newcastle-on-Tyne; Messrs. Beal and Sons, Brighton; Mr. Orchard, Notting-hill; Messrs. Johnston and Co., Edinburgh; Mr. Armstrong, Manchester; Messrs. Wright and Co., Bristol; Mr. Barron, Manchester; Dr. Benthall; Mr. Mackay, Caithness; Mr. Botwood, Ipswich; Mr. Lane; Messrs. Miller and Richards, London; Mr. Amos, Newcastle-upon-Tyne; Mr. McKenzie, Templeogue; Mr. Burton, Peckham; Mr. Houde, Paris; Mr. Lewis, Birmingham; Mr. Cripps, London; Dr. Letters, Dundee; Mr. Sorley, Tottenham; Mr. Barlow, Birmingham; Mr. Battie; Mr. Owen, Liverpool; Mr. Kuhn, London; Mr. Oldham, Liverpool; Mr. Birchall, Liverpool; Miss Frith, London; Mr. Davis, Brighton; Messrs. Lee and Martin, Birmingham; Mr. Bland, Colchester; Messrs. Macfarlan and Co., London; Mr. Maclean, Harpenden; Messrs. Hopkinson and Co., Notts; Mr. Miller, Cambridge; Mr. Yates, Bath; Mr. J. Lewis, London; Mr. Wilson, Radstock; Dr. Alderson; S., Edinburgh; A Candidate; Perplexed; X.; Justitia; A. G. P.; R. P. A., West Bromwich; M.B. Lond. & L.S.A.; J. W.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Pelt, Tralee; Dr. Macalister, Cambridge; Mr. Hallet, Bath; Messrs. Read and Co., Bristol; Mr. Vacher, Birkenhead; Mr. Hillier, Tunbridge Wells; Mr. Nourse, Exeter; Mr. Gibson, Worcester; Messrs. Krohne and Sesemann, London; Mr. St. Dalmas, Leicester; Messrs. Shelly and Co., London; Mr. Curtice, Yeovil; Mr. Holford; Messrs. Clark and Co., York; Mr. Cairns, Wakefield; Miss Carson; Messrs. Hay and Sons, London; Mr. Juler, London; Mr. Gum, Deptford; Mr. White, Wolverhampton; Dr. Needham, Barnwood; Mr. Moullin, London; Mr. Thompson, Gloucester; Dr. Pattison, Dundalk; Messrs. Spong and Son, Biggleswade; Mr. Williams, Oswestry; Dr. Gardiner, Sheffield; Mr. Sergeant, London; Mr. Dixon, Bootle; Mr. Oldham, Liverpool; Mr. Saville, Wellington; Mr. Proffitt, Banbury; Mr. Boughton, Ipswich; Mr. Page, London; Mr. Dixon, Northampton; Dr. Mackay, Esk; Mr. Brigwood, Stafford; Mr. Sotheran, York; Messrs. Smith and Sons, Weston-super-Mare; Dr. Ward, Oxford; Messrs. Chants and Co., Gloucester; Dr. Croke, Hull; Mrs. Cooke, Mold; Mr. Jenkins, Worcester; Mr. Owen, London; Mr. Brown, Tredegar; Mr. Holtby, York; Mr. Rideal, London; Mr. Keay, Polton; Mr. Engelbach, Morton Hampstead; Mr. Afflick, Manchester; Mr. Chedwick, Bentham; Mr. Casson, Handsworth; Mr. Symons, Dumfries; Mr. Whateley, Birmingham; Mr. Jeffrey, Epsom; Mr. Maw, Bradford; Mr. Guest, Darlington; Surgeon, Liverpool; Medicus, Streatham; Hope; Z.; R. G. V.; A. B., Bridgend; X., Blackheath; Amicus; Home, Colwyn Bay; Secretary, Bristol; Strophanthus, Newcastle-on-Tyne; Alpha, Hockley; M.D., Tredegar; W. T., London; B.; Tonica; R. P., Forest Hill; Matron, Dorchester; R. P., Grantham; Cantab., Burton-on-Trent; X. Y. Z., Leeds; Beta, London; W. W., Bradford; Gracilis, Newcastle-on-Tyne.

Leicester Daily Mercury, Index, Light, Word and Work, Eastern Daily Press, Greenock Telegraph, York Herald, Dundee Advertiser, Hull and East Riding Critic, Star and Cradle, Measure Fitting, Liverpool Courier, Medical Review, British Dental Review, Manchester Courier, Veterinary Review, &c., have been received.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Lectures
ON
INJURIES OF NERVES.

Delivered at the Royal College of Surgeons,

BY ANTHONY A. BOWLBY, F.R.C.S. ENG.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—My first duty is to offer you my sincere thanks for the honour you have conferred in appointing me to deliver these lectures. Believe me, I am very fully conscious of the responsibility which is incurred, and can assure you that it was not without some diffidence that I undertook the task. The subject I have chosen is Injuries of Nerves, and if any excuse is necessary for my choice, it is supplied by the fact that to this subject I have given the greater part of my spare time for the past six or seven years, and that what I submit to you is the best work I have to offer.

It is now some nine years ago, Sir, that my attention was first directed to injuries of the nerves by a case at that time under your own care in St. Bartholomew's Hospital. The patient was a man who had injured his ulnar nerve near the elbow-joint some months before admission, and you, Sir, performed the operation of nerve suture, an operation which at that time was new, and had been confined in its application to some few cases chiefly in the hands of continental surgeons. The novelty of this operation interested me, as did also the doubts expressed as to its success and the dangers attending it, and my curiosity was further aroused when I found, on seeking for more information, that there was little that was accurate and much that was speculative in the opinions expressed by writers on the subject. A year later another operation of a similar kind was performed by Mr. Holden; and in 1880, when acting as his house-surgeon at St. Bartholomew's Hospital, I had opportunities myself of treating by suture several divided nerves. From this time forward I determined to solve by my own observations, if possible, those problems to which I could not obtain a satisfactory answer in published works, and was stimulated to additional efforts by the award of the Jacksonian Prize of the Royal College of Surgeons to an essay of mine on "Wounds and other Injuries of Nerves" in the year 1882. That essay I did not publish, neither did I report any of the cases on which it was founded, for I was not at that time sure of my ground, and felt I had yet much to learn of nerve injuries, and especially of their clinical course. Fortunately for my project I was attached to a large hospital, into which many and various accidents were yearly admitted, and to the surgeons under whose care the patients were placed—yourself amongst the number—I owe a debt of gratitude larger than I can ever expect to pay. Without their constant aid and encouragement, without access to the cases under their care, it would have been impossible for me to have attained my object, or to have had the opportunity of delivering these lectures, much of the material for which has been extracted from an essay by myself, to which the Astley Cooper Prize was awarded last year.

The time at my disposal does not permit me to describe the various anatomical and physiological properties of nerves which bear upon the injuries to which the latter are subject, and I shall therefore at once pass to a consideration of those changes which result from simple section of a nerve trunk, and are seen in both its peripheral and proximal portions. With regard to the peripheral end, there is now tolerable unanimity in one respect at least, as all writers concur in describing a degeneration of both motor and sensory fibres, whilst differing in their description of the process. Waller in 1862 first thoroughly investigated the effects of division, and established the facts—(1) that section of the anterior root, before its junction with the posterior, resulted in a degeneration of that part of the motor fibres which are thereby separated from the cord; (2) that section of the posterior root on the proximal side of its ganglion resulted in a degeneration of that part of the fibres only which intervened between the point of section and the cord, while the periphery of the nerve remained intact. Waller therefore concluded that the ganglion cells of the cord formed a trophic centre for the nerves of the anterior root, while the ganglion on the posterior root fulfilled a similar office for the sensory fibres. These conclusions are generally allowed to be correct, as are also the facts from which the author deduces them, despite the difficulty of explaining the *regeneration* which we shall presently see occurs while the distal end is still separated from its trophic centres. In the above experiments the recurrent nerve fibres present in all nerve trunks may be seen for some time in a normal state in the *peripheral* segment, while in the proximal end of the divided nerve some may be seen in a degenerate condition. The recurrent fibres soon undergo atrophy.

While agreeing in the main as to the changes occurring in the distal end of a divided nerve, the various authors who have investigated this subject differ in the details of the process, and it will therefore be advisable to quote here the most important of these conclusions. Waller and Busch[1] believe that the whole of the primitive fibrils are destroyed, and are regenerated by reunion with the proximal end. Ranvier[2] describes a swelling up of the nuclei of the sheath of Schwann, the protoplasm of which collects into large masses, and encroaches upon the sheath of myeline. The swelling commences within twenty-four hours of division, and by the third day the pressure of the newly formed mass has resulted in a complete section of the axis cylinder opposite the situation of the nucleus in each of Ranvier's nodes. By the sixth day the myeline is reduced to small fragments, the protoplasm contains fatty granules, and the nuclei of the sheath are increased in number. Finally, at the twentieth day the fragments of myeline settle into masses separated from each other by slender filaments with oval nuclei formed by the sheath of Schwann. At the same time granulo-fatty degenerative changes are observed in the connective tissue cells in the endothelium lining the vessels, the fatty granules being probably derived from the myeline which passes in a state of solution through the sheath of Schwann. White blood cells become infiltrated into the substance of the nerve tubes, and appear to be instrumental in removing the débris. Mitchell[3] describes a loss of translucency from the fourth to the sixth day, and says that the white substance of Schwann undergoes an irregular segmentation and finally disappears, the nerve assuming a dull grey tint, like a piece of firm connective tissue. While confessing the difficulty of arriving at a very satisfactory conclusion, he considers that the axis cylinder is probably not affected by the process of degeneration. He does not think that this process spreads gradually from the cut end of the nerve to the periphery, but is satisfied that it affects at one and the same time the whole length of the nerve. Benecke[4] agrees with Mitchell that the degeneration affects the whole periphery simultaneously, and that it becomes of a cloudy yellow tinge and tears easily, the medullary substance coagulates and breaks down to a fine detritus, the axis cylinder becomes enlarged and swollen, and finally disappears, whilst the nuclei of the sheath multiply. MM. Cossy and Dejeune[5] consider that the large nerve fibres do not degenerate so rapidly as the fine primitive fibrils, and that up to the third day the only change is that the axis cylinder is abnormally friable and the nuclei of the sheath swollen. Changes in the medullary sheath, similar to those already described, commence on the fifth day, and are considered by these authors to be secondary to those which occur in the axis cylinder; the latter entirely disappears by the twelfth day. Leegard[6] investigated the condition of the distal ends of the nerves after having produced a simple solution of continuity of the myeline and axis cylinder, and not of the sheath, by the application of a ligature which was immediately removed. He found that in three days the axis cylinder broke up in places, and the myeline ran together in cylindrical masses, and ultimately underwent a granular degeneration, the nuclei enlarged and multiplied, and the axis cylinder finally disappeared from the tenth to the fifteenth day. This process of degeneration attacked the whole peripheral

[1] Zeit. für Wis. Zool., 1854, vol. vi.
[2] Comp. Rend. de l'Académie de Science, 1872; and Cornil and Ranvier's Path., 1882.
[3] Injuries of Nerves.
[4] Virchow's Archiv, 1872.
[5] Archives de Phys., 1876.
[6] Archiv de Klin. Méd., 1880.

segment at once. The foregoing conclusions are all drawn from experiments on animals.

In two cases in which I have had the opportunity of examining the nerves of men (one on the fifteenth day after injury and one on the thirtieth) in which operations for the purpose of secondary suture were undertaken, the condition of the peripheral end was very satisfactorily demonstrated after staining in osmic acid. In the case in which the nerve had been divided fifteen days previously there was found much segmentation of myeline, which had collected in droplets of varying size in the nerve sheaths. In most of the sheaths there was some myeline, but in a few it was completely absent. The nuclei of the sheath had increased in number, although not to any great extent. The condition of the axis cylinders was very difficult to establish with certainty. In most parts of the sections they had completely disappeared, and it was only after a very prolonged search that I could satisfy myself that some of them were yet present, though so much altered in contour as to be almost indistinguishable. In the case in which the section was thirty days old the changes mentioned above were all further advanced. Only a few drops of myeline remained; the axis cylinders had entirely disappeared (or at any rate could no longer be distinguished); whilst the nuclei of the sheath were again but slightly increased in number. In another case I examined the peripheral end of a divided nerve three months after section. Here it was impossible to recognise any nerve tubules at all. There was a complete absence of myeline and of axis cylinders. In the nerves which I have examined at times varying from three to six months after injury similar appearances are found. In most of such specimens the places formerly occupied by nerve bundles are marked by the presence of circular masses of tissue which have the appearance of connective tissue with many nuclei. These masses are, however, much smaller than the healthy nerve bundles, and consequently do not fully occupy the spaces in the perineurium, but appear to have shrunk away from the surrounding tissues. My own observations on human nerves would thus appear to accord with those of other observers on the nerves of animals, and it may be concluded that the degenerative changes are signalised by the destruction of the myeline, the multiplication of the nuclei, and the loss of continuity of the axis cylinder. The majority of observers, and amongst them the most trustworthy, are also agreed that these changes occur in the whole length of the peripheral portion at one and the same time, while others maintain that they commence at the cut end and spread downwards, either a short distance from the point of section or else along the whole periphery. This degeneration commences within a day or two of the injury, and within five or six weeks the nerve has undergone complete atrophy.

Central end.—As has already been mentioned, the fibres of the proximal end are comparatively slightly affected by the nerve section. Ranvier describes the changes as being limited to one, or at most two, of the inter-annular segments, and says that the myeline, instead of becoming broken into large fragments, which subsequently become smaller, as in the peripheral end, is rapidly reduced into fine granules, which later on assume a yellowish-brown colour with osmic acid. The nuclei multiply and increase in size, but instead of encroaching on the medulla they remain flattened against the sheath of Schwann, whilst the axis cylinder remains intact. An infiltration of white blood-cells into the myeline occurs, resembling that already described in the peripheral segment. Neumann also describes somewhat similar changes. Leegard[7] describes changes like those which he noticed in the peripheral end as occurring in the first inter-annular segment of the proximal end; the next three or four segments become also irregular and shorter, with the medulla broken up. The sheath is empty at places, and shows nuclear prolification.

Bulbs.—It is now many years since it was noticed that after section of a nerve the upper end became bulbous, and this has more particularly excited observation in stumps. The very general opinion as to the structure of these tumour-like swellings in the nerves is that they consist of fibrous tissue, a statement which has been handed down from one author to another without apparent investigation. George Hayem in 1877[8] was the first to point out that these bulbs consist not only of newly formed fibrous tissue, but also of new nerve elements. He believes that after section the most distal portion of the upper end degenerates, and is replaced by young fibres which undergo a gradual process of development. In a case which I have recently examined, the amputation (through the leg) had been performed five years previously in a lad aged twelve years. Reamputation became necessary on account of an insufficient covering for the bones, and an examination of the bulb on the anterior tibial nerve showed on cross section a greater number of fibres than did the healthy nerve above. The only conclusion that can be arrived at is that the additional fibres were of new formation; they were mixed with newly formed fibrous tissue. A microscopic examination of such a bulb under a low power shows a proliferation of the perineurium, which penetrates between the different fibres in the bundles, and separates them into smaller bundles of three, four, or more fibres. Later on, these fibres becoming compressed, gradually lose their sheath of myeline, and so appear smaller than normal, until finally they come to be composed only of axis cylinders. The lower down in the bulb the section is made, the more complete do these changes appear; so that between this part and the junction of the bulb with the healthy nerve above all stages of transition between connective tissue and healthy fibres may be seen. Considering that the young nerve fibres also appear on section to be smaller than normal, it becomes very difficult to say for certain whether any individual nerve tube is in a stage of transition into a higher or lower state. Nevertheless, as a transverse section shows, on careful examination, that although some of the thickness of the bulb is due to an increase of the connective tissue elements, yet the larger amount of it is composed of nerve fibres, we are naturally driven to the conclusion that some of these must be of new formation. Sections of the nerve trunk above the bulb do not usually show any of the degenerative changes that are met with in the peripheral end, there being no increase of connective tissue or decrease in the white substance of Schwann unless inflammatory changes have been started and "chronic neuritis" has supervened. In those cases, however, where the section is of very long standing, it appears that after the lapse of a considerable time, probably years, the nerve fibres do in part atrophy and degenerate, and thus follow the example of other tissues and bear evidence to the general truth of the pathological law that "atrophy results from non-use." I have not myself had opportunities of examining the proximal ends of divided nerves at any distance from the seat of injury after simple section, but I have examined the nerves from limbs in which amputations have been performed in bygone years, and have found in them that many of the nerve fibres are diminished in size, that their myeline sheath is greatly shrunken, and that some of them have quite disappeared. This is a pathological fact of the greatest clinical interest, and one to which I shall again have occasion to refer.

Regeneration and union.—The process of degeneration, which has just been described, is succeeded by one of regeneration, resulting, in favourable cases, in a complete restoration of the nerve. It is of great importance to observe that this regeneration *can* take place in the peripheral end previous to any reunion with the proximal extremity, and an examination of the former several months after section will show that some of the axis cylinders have been re-formed, and that around them a deposit of myeline is slowly developing. The fibres are not, of course, collected into symmetrical bundles, as in a healthy trunk, and are smaller than natural; they may be seen scattered about amongst the surrounding connective tissue in all stages of development, some of the axis cylinders yet naked, others with varying amounts of myeline around them. It seems strange that such regeneration should take place without reunion with the nutritive centre, but the importance of the fact for a proper appreciation of the symptoms and results of nerve sections, as well as for the light it throws on the question of treatment, makes it one of much interest. As to the exact process by which these new nerve fibres are formed and the divided ends reunited, time does not permit me to do more than refer very briefly to the opinions and work of others. As a result of experiments on various animals, it has been shown by numerous writers that the nuclei of the sheath are the chief agents in the repair, and that they form new axis cylinders and unite the divided ends. The description by Ranvier of an extension of the axis cylinders of the upper end into the empty sheaths of the peripheral portion is not generally credited. I have

[7] Op. cit. [8] Rev. des Sci. Méd.

already alluded to my own examinations of human nerves in a state of degeneration, and shall now describe the appearances I have met with in cases in which regeneration of the peripheral end had occurred after section, independently of union with the upper portion.

The first case was that of a lad, aged eighteen, in whom an operation for reunion of a divided ulnar nerve was undertaken seven months after injury. An examination of the portion of the peripheral end, which was removed preparatory to suture, showed that, scattered throughout a transverse section, were several small, imperfectly developed nerve fibres such as are met with (and have already been described) in the bulbous proximal end. These new fibres were not collected into definite bundles; they were much smaller than natural, and their myeline sheath was scarcely perceptible. The total number of these new fibres was but small, and I was unable to trace their development in a satisfactory manner.

The second case was that of a woman, aged fifty-three, who had divided the median nerve just above the wrist-joint. An operation for suture was undertaken nine months later, and the condition of the resected portion of the peripheral end was found to be as follows. The circular spaces in the neurilemma, which, in a state of degeneration, I had previously found in other cases and have already described as partly filled with nucleated connective tissue, I now found to be occupied by nerve fibres, in varying stages of regeneration. The steps in the formation of these fibres could, moreover, be most clearly traced. Their first appearance was in the form of oval and spindle-shaped nuclei, which seemed to be identical in structure with the nuclei of the sheath. These nuclei were arranged in bundles, with their long axes parallel to that of the nerve trunk. The next step was the elongation of the nuclei and their gradual transformation into fibres, around which subsequently a myeline sheath was formed. In some parts of the section, bundles of newly formed nerve fibrils could be seen occupying the spaces in the neurilemma which had evidently been previously occupied by the healthy nerve bundles, before the time when the injury was inflicted. The new fibres in some bundles were in a much more advanced stage of development than those in others, the regeneration appearing to progress simultaneously throughout all the tubules in each bundle irrespective of the condition of the fibres in others.

I have also had the opportunity of examining the nerve ends in a case in which the ulnar had been divided nearly two years before I saw the patient. The nerve had been completely cut across, and no union had taken place, the upper and lower ends being separated by about half an inch or more of firm cicatricial tissue. A microscopical examination of the peripheral end showed that many of the fibres had been regenerated. A large number of the bundles contained numerous nerve fibres in various stages of development. In some the axis cylinder alone was formed. In many others the myeline sheath surrounded the young axis cylinders, whilst in some the "nodes of Ranvier" were well marked.

There is, indeed, a tolerable consensus of opinion as to the part played by the nuclei of the sheath, from which, according to most authors, the new axis cylinders are formed. The strongest objection to Ranvier's theory, that the undegenerate fibres of the central end grow into the empty sheath of the periphery, lies in the fact that, as I have already described, the peripheral end will regenerate even when ununited to the central healthy fibres; and if further proof of this be necessary, it may be found in the investigations of Phillippeaux and Vulpian,[9] who not only saw regeneration of the peripheral fibres without union with the proximal end, but found the same take place in a piece of nerve resected and transplanted into the surrounding tissues. If, then, the peripheral end has become regenerated, and is placed in sufficiently close proximity to the central portion, union will result by the continued formation of nerve fibres between the divided extremities. But, on the other hand, should union fail, it appears probable that the nerve again degenerates, perhaps never to recover. I have found no mention of this by other authors, but am, nevertheless, inclined to feel certain that such changes must occur, for otherwise we should have some difficulty in explaining those cases in which many years after injury the nerves have been found completely atrophied. As examples of such I append the following two cases. Israel[10] records the case of a man who had been shot through the median and ulnar nerves thirty-two years previously. The peripheral ends were found to have only the thickness of a knitting-needle, and to consist chiefly of connective tissue. In vol. xxiv. of the Pathological Society's Transactions, Mr. Butlin describes a case in which the ulnar nerve had been divided fourteen years before death. No union had taken place, and the lower end was found to consist nearly entirely of connective tissue, a microscopic section showing that the healthy nerve fibres had entirely disappeared, while the presence of any axis cylinders was very doubtful. No doubt many such cases can be found, and all bear but one of two explanations. Either the divided nerve never became regenerated at all, or else it subsequently again degenerated. The latter appears to me the most likely, but before the matter can be considered settled more investigation is necessary.

The conclusions which may be drawn from the most recent investigations are: 1. That the nuclei of the sheath of Schwann (which are developed from epiblast) form the new axis cylinder. 2. That the myeline is subsequently formed around the new cylinder. 3. That the peripheral end may become in part regenerated without forming any union with the proximal extremity, but that it probably again tends to degenerate if union fails.

(To be concluded.)

[9] Gaz. des Hôp., 1861.

[10] Virchow's Archiv, vol. lxxiv.

ABSTRACT OF

Lumleian Lectures

ON THE PATHOLOGY OF INTRA-UTERINE DEATH.

Delivered at the Royal College of Physicians of London, March, 1887,

BY W. O. PRIESTLEY, M.D., F.R.C.P., LL.D.,
CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL, AND LATE PROFESSOR OF OBSTETRIC MEDICINE, KING'S COLLEGE.

LECTURE III.

DR. PRIESTLEY in this lecture discussed the diseases and anomalies of the placenta, one of the chief difficulties in the study of which arose, he observed, from the tendency on the part of authors to regard the particular morbid change which they have had the opportunity of investigating as the chief or only disease with which the organ is affected. All other morbid appearances are for them but consequences or complications of a specific and cardinal lesion upon which the rest depend. Thus Charpentier accepts the investigations of Robin as illustrating the whole range of placental pathology, and believes that when disease has invaded the placenta it commences always in fibro-fatty change; and consequent on this, blood extravasations and successive transformations of effused blood account for all the various pathological appearances associated with the death or enfeebling of the fœtus. Verdier and Bustamente, on the other hand, take entirely another view of these changes. To the lecturer it appeared that one cannot long investigate the diseases of the placenta without discovering that they are most complex in their nature, and that they proceed from a variety of causes inextricably intermixed—sometimes one pathological condition having the precedence, sometimes another. The placenta is, in truth, as liable to be affected by a variety of diseases as the liver or the lung, and some of its diseases bear not only a striking resemblance to diseases occurring in those organs, but have affinities with them and may depend on the same causes. Confusion has also arisen from investigators describing the same morbid condition under a different name, probably because it was observed only in one stage of progress or with some variations; and some have fallen into the error of ranging affections which are intrinsically different under the same appellations. Extravasations of blood into the young placenta are very common, and they occur as the result of rupture of some of the vascular maternal loops which ramify throughout the placental mass and surround the villi of the chorion. These vascular maternal loops eventually become the sinuses or

LANGMORE DEFENCE FUND.

IN response to the appeal which recently appeared in THE LANCET several donations have been forwarded; but a sum of £122 is still required to pay the legal expenses necessarily incurred by Dr. J. Wreford Langmore for his defence in the recent trial, although he obtained the verdict of the jury with full costs. Subscriptions should be sent to Mr. George Eastes, M.B., 69, Connaught-street, Hyde Park-square, London, W.

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Mr. G. E. Walker.—We know of no institution where the suggestion is acted upon; but it appears worthy of consideration.

M.R.C.S. is referred to an article on the subject which appeared in THE LANCET of Nov. 20th last.

Mr. B. B. Jell will find his question answered in our current issue.

R. N.—Once or twice daily.

ABDOMINAL PALPATION.

To the Editors of THE LANCET.

SIRS,—I am informed that in one of the numbers of your journal the statement was made that the method of abdominal palpation was not taught in any of the medical colleges. I take pleasure in mailing to you to-day one of the announcements of the Long Island College Hospital, by which you will see that, whatever may be true of other colleges, this one recognises the value of this means of diagnosis. I may also add that this plan has been carried out with us for two years past.

I am, Sirs, yours very truly,

J. H. RAYMOND, Secretary.

Long Island College Hospital, Brooklyn, N.Y., April 7th, 1887.

Dr. C. E. Monro (Penge).—If the notice arrived, and we have no recollection of it, it has been mislaid.

Dr. Glanville.—The formula was given in our issue of March 26th.

Dr. J. Hardie's letter is crowded out this week.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Dyce Duckworth, London; Dr. Braxton Hicks, London; Dr. Dickinson, London; Mr. Harrison Cripps, London; Herr Fischer, Jena; Mr. C. Higgens, London; Mr. J. W. Watson, York; Mr. Walter Whitehead, Manchester; Dr. Adams, Runcorn; Dr. Forbes Winslow; Mr. Stanley Murray, Putney; Mr. Batterham, St. Leonards; Dr. C. E. Monro, Penge; Mr. Branthwaite, Willesden; Mr. Faulkner, London; Mr. Tallack, London; Mr. H. S. Jackson, Walmer; Mr. Wickham Barnes, London; Mr. H. Bramwell, Newcastle-on-Tyne; Dr. Julius Mickle, London; Mr. J. H. Raymond, Brooklyn; Messrs. Bryce and Whitelegge, Nottingham; Dr. J. Beckett, London; Messrs. Lynch and Co., London; Mr. C. H. Wells, London; Messrs. Kegan Paul and Co., London; Dr. Sawtell, London; Messrs. Maclure, Macdonald, and Co., Glasgow; Mr. J. B. Pike, Loughborough; Messrs. Loeflund and Co., London; Mr. K. Tomson, Luton; Mr. W. E. Sacker; Mr. Barton Smith, London; Mr. R. J. Hutton, London; Messrs. Todd, Burns, and Co., Dublin; Dr. Rentoul, Liverpool; Mr. W. G. Evans; Mr. Kenneth Millican, London; Mr. E. C. Andrews, London; Messrs. Burroughs and Wellcome, London; Mr. G. Banks, London; Messrs. Condy and Co., London; Mr. Lysaght, Sydney; Mr. T. Laffan, Cashel; Mr. W. Greene, Wallingford; Mr. F. C. Turner, London; Mr. G. P. Best, Cheltenham; Mr. Kingzett, London; Mr. Blanch; Messrs. Peebles and Son, London; Mr. Haslam, Birmingham; Dr. M'Kendrick, Glasgow; Dr. McKee, Wiesbaden; Mr. Beck, London; Mr. M. H. Taylor, Richmond; Mr. J. Gilroy, Birmingham; Dr. G. D. Douglas, Bournemouth; Mr. Mosely, Leeds; Dr. Railton, Manchester; Dr. Dudgeon, London; Mr. Cornish, Manchester; Mr. Mayo, London; Mr. Thomas, Birmingham; Mr. Jeaffreson, Newcastle-on-Tyne; Messrs. Beal and Sons, Brighton; Mr. Orchard, Notting-hill; Messrs. Johnston and Co., Edinburgh; Mr. Armstrong, Manchester; Messrs. Wright and Co., Bristol; Mr. Barron, Manchester; Dr. Benthall; Mr. Mackay, Caithness; Mr. Botwood, Ipswich; Mr. Lane; Messrs. Miller and Richards, London; Mr. Amos, Newcastle-upon-Tyne; Mr. McKenzie, Templeogue; Mr. Burton, Peckham; Mr. Houde, Paris; Mr. Lewis, Birmingham; Mr. Cripps, London; Dr. Letters, Dundee; Mr. Sorley, Tottenham; Mr. Barlow, Birmingham; Mr. Battie; Mr. Owen, Liverpool; Mr. Kuhn, London; Mr. Oldham, Liverpool; Mr. Birchall, Liverpool; Miss Frith, London; Mr. Davis, Brighton; Messrs. Lee and Martin, Birmingham; Mr. Bland, Colchester; Messrs. Macfarlan and Co., London; Mr. Maclean, Harpenden; Messrs. Hopkinson and Co., Notts; Mr. Miller, Cambridge; Mr. Yates, Bath; Mr. J. Lewis, London; Mr. Wilson, Radstock; Dr. Alderson; S., Edinburgh; A Candidate; Perplexed; X.; Justitia; A. G. P.; R. P. A., West Bromwich; M.B. Lond. & L.S.A.; J. W.

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